BOOKKEEPING AND ACCOUNTING

(REVISED)

McKINSEY

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Bookkeeping and Accounting

By

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PREFACE

The subject matter of this text may be divided broadly into two parts. The first seventeen chapters deal with the general principles governing the construction and use of reports, accounts, and records. In these chapters the accounts and records of a corporation and the accounts of a manufacturing business are given particular attention. Chapter XLVIII provides a drill on the subject matter of Chapters XXXIX to LXVII inclusive and also provides a thorough review in the application of accounting principles.

The last twenty-four chapters deal primarily with the use of accounting in the control of the relations which the business unit must have with those both external and internal to its organization. The purpose and aim of these chapters is fully set forth in Chapter LVI on "The Relation of Accounting to Business Management".

Chapters LVII to LX inclusive deal with the construction and interpretation of the orthodox financial statements which are used by business executives, stockholders, creditors and governmental agencies in judging the financial condition and the earning capacity of different types of businesses.

Chapters LXI to LXVIII inclusive treat of records and reports used in the control and management of the operations of the functional departments of a business. Chapters LXIX to LXXIV inclusive deal with special features of accounting practice. Chapter LXXV explains the accounting organization and procedure by which the information discussed in the preceding chapters is collected, organized, classified, and presented for executive use. Chapters LXXVI and LXXVII explain the work of both the public and company auditor, and Chapters LXXVIII and LXXIX deal with personal budgets and the budgets of business firms.

There is much material included in this text which is not ordinarily included in a text on bookkeeping and accounting. This material is introduced to give the student sufficient information with reference to the problems of business management to

enable him to understand how accounting may be used in their solution. Throughout the text, the student is taught to look at the accounting records from the point of view of the manager, rather than from the point of view of the bookkeeper. This not only enables him to construct the records so that they will be most useful to the manager, but also gives him a training which will assist him to advance to a managerial position.

The text material is divided into distinct chapters, each chapter dealing with one principal topic. Each chapter consists of three parts:

(a) A discussion of the accounting principles which relate to the topic of the chapter.

(b) A series of questions and short problems for class discussion, which develop and apply the principles discussed in the chapter. These questions are primarily thought questions which develop the student's ability to analyze and interpret accounting and statistical data.

(c) Laboratory exercises and problems which illustrate and require the application of the principles discussed in each chapter. Although most of the laboratory material consists of short exercises which illustrate specific principles and minimize detail, two complete "sets" are given which afford the student an acquaintance with the bookkeeping system as a whole.

The material is especially adapted to instruction by the class recitation method. It has been arranged so that class assignments can be made and recitations based on these assignments conducted effectively.

The author is indebted to many teachers and accountants for assistance and helpful suggestions in connection with the preparation of the manuscript. Among those to whom he is especially indebted are the following: Mr. D. D. Sells, of the firm of James O. McKinsey and Company, who aided in the preparation of several of the chapters; and Mr. Earl W. Barnhart, Chief of the Commercial Section, Federal Board of Vocational Education, Washington, D. C., who is the author of Chapters LXXII and LXXIII.

James O. McKinsey

Chicago, Illinois
September 1, 1927

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*Questions for Class Discussion and Laboratory Material are given at the conclusion of each chapter.

CHAPTER XXXIX

THE NATURE AND CHARACTERISTICS OF THE CORPORATION

Need for Consideration of the Corporate Form

The ownership of a business may be vested in a sole proprietorship, a partnership, or a corporation. In previous chapters the nature and characteristics of the sole proprietorship and of the partnership have been explained. It is now necessary to consider the nature and characteristics of the corporation and to see the additional information necessary for effective control under this form of organization.

During the past few years the corporate form of organization has become of increasing importance because of the rapidly increasing number of businesses owned and controlled by the corporate form of proprietorship. With the increasing size of the business unit, there has come a demand for such a quantity of capital as can be obtained only by securing contributions from many investors. To obtain the necessary number of investors, the investment of many who have accumulated savings must be secured. These investors desire an income from the use of their savings, but desire to avoid being burdened with the active duties of management and to limit their liability for loss at least to the amount of their investment. The corporate form of business organization satisfies these demands, and, as a result, has secured for itself a firm footing in the conduct of commercial and industrial enterprises.

The corporation marks a decided improvement over the partnership as an agency for furthering large-scale industry. Consequently, it is the customary form of organization for business firms of any considerable size. It is quite important and necessary, therefore, for the student of accounting to acquaint himself with its characteristics. To explain and illustrate these is the purpose of the present chapter and the chapters immediately following.

The Corporation Defined

Chief Justice Marshall, in the well-known Dartmouth College decision, defines a corporation as "an artificial being, invisible,

intangible, and existing only in contemplation of law". More concretely and comprehensively, it may be defined as "an artificial person, separate from its members, authorized by law, created by charter,[1] and having, in addition to the powers expressed in its charter, the implied powers of a natural person". The foregoing definitions emphasize:

(1) That the corporation is an artificial being.
(2) That it is a distinct entity, separate from the individuals who are responsible for its creation and operation.
(3) That it is created by law and exists only in contemplation of law.
(4) That its powers are defined in the charter by which it is created, but that it possesses the implied powers of a natural person.

Since the corporation possesses the implied powers of a natural person, it can perform business transactions in its own name; it can own and exchange property and can carry on any form of industrial or commercial activity which is not prohibited by law. The possession of these powers imposes on it certain liabilities; for example, it can be held responsible for its debts and for contribution to the support of the state through taxation.

Comparison of Corporation and Partnership

The corporation is differentiated from the partnership by the following characteristics:

(1) The authority of the members to act for the company is limited.
(2) The liability of the members is limited.
(3) The organization may be continued in existence indefinitely.

In a partnership each member may act for the firm, and the obligations so incurred are binding upon the firm so long as they are such as an outsider may reasonably expect the partnership to incur. In a corporation no member can transact business for the company unless given specific right to do so as an agent or officer. This provision of corporation law has two desirable results: (1) it protects the corporation from the possible unwise acts of members who might assume authority to act for it; (2) it relieves from the burdens of management those members who do not desire to assume such obligations.

In a partnership each member is liable for the debts of the firm to the extent, if necessary, of his entire estate; in a corporation the liability of each member for the debts of the corporation is usually limited to the amount of his investment. In

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[1]It is explained subsequently that the charter of a corporation is the written permission granted by the state for its organization and operation.

national banks the stockholder is liable for double his investment. In a few states a liability in excess of their investment is imposed on all stockholders.

A partnership is automatically dissolved by the death, withdrawal, bankruptcy or mental incapacity of one of its members; the life of a corporation is practically unlimited because it continues as a perpetual body throughout the life of its charter, and the charter may be renewed without difficulty. As the following quotation very well states, "A corporation is an artificial person, created for preserving in perpetual succession certain rights which, being conferred on natural persons only, would fail in the process of time."

Advantages of the Corporate Form

The advantages of the corporate form have been indicated in the definition of the corporation and in the comparison of the corporation with the partnership form of organization. To summarize, these advantages may be stated as follows:

(1) *Limited Liability of Members.* The private estates of the stockholders can not be held for the debts of the corporation. If the corporation fails, stockholders may lose a portion or all of their investment, but they will not lose more than that amount or an additional amount equal thereto when the double liability applies. This provision of corporation law is of decided importance in the financing of a corporation. Investors are encouraged to invest small amounts in a corporation because of the possibility of large profits arising from the use of a large amount of capital and the absence of a liability in excess of the amount invested.

(2) *Legal Entity of the Corporation.* A corporation is an artificial person, an entity separate and distinct from its members. In the capacity of a distinct legal entity, it may act under a corporate name. It may secure, hold, and dispose of property in its corporate capacity. It may enter into contracts with outsiders or with its own stockholders. It may enforce these contracts by suit, if necessary. It has, therefore, a freedom of action which is lacking in the partnership.

(3) *Holding of Stock Evidenced by Transferable Shares.* One of the most attractive advantages of a corporation is that the shares issued to its members as evidence of ownership of stock are transferable. This makes possible the sale of the member's interest at his pleasure without interfering with the operations of the corporation. It also affords the member the opportunity to use his stock as collateral for a loan in case he desires to borrow funds.

(4) *Centralization of Control.* Through the working organization usually employed by the corporation, the responsibility of management may, if desired, be delegated to one head. This makes possible centralized and unified control and management.

(5) *Accumulation of Capital.* The number of members in a corporation is not limited, and, since by having a centralized control a large membership does not become unwieldy, the membership often totals many thousands. This makes it possible to secure a large mass of capital, and this, in turn, makes possible the development of large-scale industry.

Disadvantages of the Corporate Form

There are certain disadvantages which may arise in connection with the corporate form of organization. Some of these are inherent in the corporate form, while others may arise under particular circumstances. The most important of these disadvantages are:

(1) *Onerous Taxation.* As an artificial being created by law, the corporation is subject to taxation by a law-making body. At the present time, corporations are subject to taxation by both the state and national governments. In some cases the taxes imposed on corporations are heavier than those imposed on individuals and partnerships.

(2) *Filing of Numerous Reports.* As a basis of taxation and for purposes of supervision, both state and national governments require reports to be filed by corporations giving information with reference to their operations. Some states require so many detailed reports that their preparation may become costly and burdensome. If the corporation maintains proper accounting and statistical records, the preparation of these reports is usually not difficult.

(3) *Publicity of Corporate Affairs.* Through the reports which must be made to the governmental authorities, matters of importance may be made known to the public. Such information, when secured by competitors, may be used to the detriment of the corporation. The probability of this happening is not large.

(4) *Stockholders' Limited Liability.* Although the limited liability of the stockholders is advantageous to those investing in the stock of the corporation, it may work as a handicap to the corporation when it seeks to borrow funds, since the security of the creditors is limited to the assets of the corporation. In the case of sole proprietorship and the partnership, the private resources of the members also serve as security. In a well-managed corporation this feature is not of much importance, since its assets will be sufficient to serve as security for its loans.

(5) *Limitations of Activity.* In some states corporations are prohibited from entering certain lines of activity. In all states they are limited to the activities granted to them in their charters. If the charter is properly drawn, it is usually possible to carry on the activities in which it is proper for the corporation to engage.

(6) *Lack of Personal Interest in Management.* Unlike the partnership, the corporation is not managed directly by the members, but through agents selected by them. This may lead to the placing of the management of the corporation in the hands of those who do not have the personal interest possessed by the members. Usually this danger is eliminated by selecting members of the corporation for its principal officers at least. During the past few years there has been a widespread tendency to have all the employees become members of the corporation.

The Working Organization of the Corporation

In the corporation the proprietorship is vested in the members of the corporation, who are known as *stockholders*. The ownership of the stockholders is evidenced by *shares* of stock. Each share of stock gives the holder thereof the right to one vote in the management of the business unless it be specified at the time of its issue that it is non-voting stock. Each member's power, therefore, depends upon the number of shares he holds.

If desired, a member may transfer his voting power to another stockholder. By this means one stockholder may exercise authority quite in excess of that to which his own holdings entitle him. In many corporations the membership is large and the stockholders are widely scattered territorially. In this case the stockholders who are unable to attend stockholders' meetings may delegate their authority by power of attorney to an agent who votes their stock. This results in voting by *proxy*.

Although the ultimate control of the corporation is vested in its stockholders, they exercise this control only indirectly. They elect at regular intervals, usually annually, a *board of directors* to whom they delegate the duty of supervising and controlling the activities of the business. The board of directors makes periodic reports to the stockholders. These reports show the results of the operations of the past period and frequently contain recommendations as to plans and policies for the coming period. These recommendations are approved or disapproved by the stockholders at their periodic meetings.

The board of directors delegates the administrative duties to the general *officers* whom the members of the board select to direct the administrative functions of the business. These officers usually consist of a president, one or more vice-presidents, a secretary and a treasurer. Each vice-president may be in charge of a specific function of the business; for example, there may be

a Vice-President in charge of sales and a Vice-President in charge of production. The President is usually the chief executive officer of the business. The other officers, although they may be selected by the board of directors, act subject to the authority and control of the president. The general officers entrust the execution of the policies of the business to subordinate officers, and these in turn employ the services of assistants. This form of organization is shown graphically in Illustration No. 96.

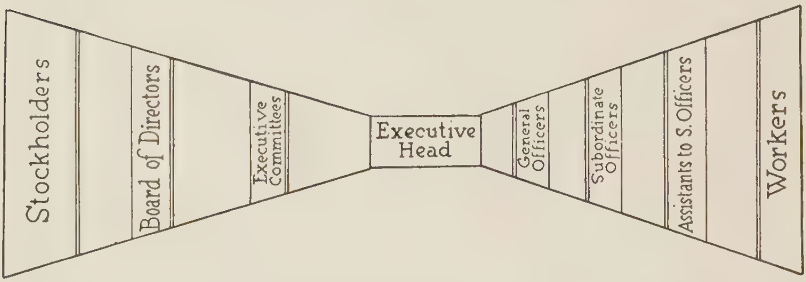


Illustration No. 96, Corporate Form of Organization

This chart shows the narrowing down of the responsibility for management from the numerous stockholders, through the board of directors and executive committees, to the executive head of the business, who is usually the president. It then shows how the administrative duties of the chief executive are delegated to the general officers, the subordinate officers, and finally to the assistants of the subordinate officers who are the ones in direct contact with the workers. A very good illustration of this delegation of duties may be found in the case of a manufacturing firm which has a Vice-President in charge of production, and under him a superintendent of the shops, who in turn has subordinate to him the departmental foremen; these foremen direct and control the activities of the workers.

Relation of Accounting to the Corporate Form

From this chart, the student can derive some idea of the functioning of records and reports in an organization that is as highly specialized as it is usually necessary for the corporation to be. In such an organization the manager or executive staff can not rely on personal observation and impression when formulating plans and policies. Errors would occur too frequently, and mistakes in judgment in important matters are likely to be costly. Intelligent administration through such a form of organization

will necessitate the keeping of records which will provide information of three kinds:

(1) Information which will enable the stockholders, board of directors and the executive staff to determine the general policies of the business and the duties which should be delegated to the subordinate managers.

(2) Information which will enable each subordinate manager to perform properly the duties delegated to him and to co-ordinate his activities with those of all the other subordinate managers.

(3) Information which will enable the executive staff, the directors, and stockholders to judge the efficiency with which the duties delegated to the subordinate officers have been performed.

To obtain this information it is necessary to have a comprehensive system of records and reports. It is the purpose of the following chapters to continue the discussion begun in the preceding chapters of the principles which should govern the construction of these records and reports. It may be well to state that the principles governing the construction and operation of the accounting system for a corporation are the same as those governing the construction and operation of the accounting system of a business operating under any other form of proprietorship, and the same principles govern the procurement of the additional information required in connection with the corporation.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

"Many who have accumulated savings . . . desire an income from the use of their savings, but desire to avoid being burdened with the active duties of management and to limit their liability for loss at least to the amount of their investment." Give as many instances as you can of persons who would fit this description.

— 2 —

John Walsh, thirty years of age, has accumulated savings of $8,000.00. He is employed at present as head of a department in a men's clothing store, but desires to conduct a business of his own. He has two opportunities to invest his savings: (1) in the stock of a corporation conducting the largest department store in the city; (2) to purchase a half interest in a small but prosperous men's specialty store. Which investment will he probably make? Why?

— 3 —

George Mason, seventy years of age, is a retired clothing merchant. He is offered the same investments offered John Walsh. Which will he probably make? Why?

— 4 —

James Forbes has been conducting a retail dry goods business as sole proprietor. He wishes to add several new departments and expand his business. His funds are inadequate and it is impracticable for him to borrow from his bank sufficient funds to finance the project and repay the loan in the short credit period extended by the bank. He decides to reorganize his business as a partnership or a corporation, and asks your opinion as to the relative advantages and disadvantages of these two forms of organization. Assuming any facts necessary, what advice would you give Mr. Forbes? Why?

— 5 —

E. W. Smith is advised to buy stock in a corporation which has more than a thousand stockholders. Mr. Smith is inclined not to accept the offer because he says he would play too small a part in the affairs of the corporation. What argument can you give him to persuade him to take stock in the corporation?

— 6 —

On the other hand, what arguments might justify Mr. Smith in feeling that the stock in this company is not desirable for his purposes?

— 7 —

(a) Who are the proprietors in a sole proprietorship, a partnership, and a corporation? (b) In each of these forms of organization, who is usually responsible for the active management of the business, and how is he selected?

— 8 —

Engaged in the candy manufacturing industry in your city are S. D. Tatum, a sole proprietor; Price & Breese, a partnership; and the Purity Candy Company, a corporation. Compare the method of organizing these three businesses.

— 9 —

What difference in the working organization of these three concerns would you expect to find?

— 10 —

S. D. Tatum, Edward Price, a partner in the firm of Price & Breese, and John Haywood, a stockholder in the Purity Candy Company (Question 8) apply to their banks for personal loans. What security may each offer for his loan?

— 11 —

(a) When the investors in a corporation are widely scattered territorially and hence are unable to attend stockholders' meetings, how may they exercise their voting power? (b) Do you see any disadvantages in such "absentee control" on the part of stockholders? Explain. (c) Give a reason for buying stock in a distant corporation when it is not possible for the investor to be present at stockholders' meetings.

— 12 —

H. R. Hitchcock, who lives in Vermont, is a large stockholder and a member of the board of directors of a steel corporation which is located in Pittsburgh, Pennsylvania. Johnson, Finn, and Wall are members of the executive committee of the board of directors. Baker, Patterson, and Kennedy are managers of the production, purchasing, and sales departments respectively. Explain how these men in their various official capacities are kept informed of what each is doing and how together they are able to manage the affairs of the corporation properly.

— 13 —

Compare the need for reports in such a corporation as that described in Question 12 with the need for reports in a partnership and in a sole proprietorship.

— 14 —

A condensed Balance Sheet of the King Manufacturing Co. as of December 31 is as follows:

KING MANUFACTURING CO.

BALANCE SHEET, DECEMBER 31, 192

Assets			*Liabilities*		
Current Assets.......	99,500		Current Liabilities...	180,000	
Fixed Assets.........	400,000		Fixed Liabilities.....	220,000	
Deferred Charges.....	500				
			Proprietorship		
			Capital Stock.......	100,000	
	500,000			500,000	

The corporation is unable to pay its creditors and is forced into the hands of a receiver. In liquidation, the current and fixed assets realize $50,000.00. James King owns one-half of the capital stock of the company. What is his liability to the creditors of the company?

— 15 —

If the King Manufacturing Co. were a partnership, owned by James King and John Brown, equal partners, and liquidated in the same manner and with the same results given in Question 14, what would be the liability of Mr. King to the creditors (a) if Brown had no property outside of his investment in the partnership, (b) if Brown had sufficient property to meet all of the obligations of the partnership?

CHAPTER XL

PROPRIETORSHIP IN THE CORPORATION

Proprietorship Vested in Stockholders

In a sole proprietorship the business is owned by one person who exercises full control. In a partnership the business is owned by two or more partners, each one possessing the right to act for the firm. Proprietorship is vested in the partners, each having a separate liability and a separate power to act as an agent of the partnership. In a corporation the business belongs to all the stockholders, but no one possesses the right to act independently of the others. All must act as a body, as an "artificial person." All property is held in the name of the corporation and not in the name of the members. The control of the capital of the corporation may be entrusted to one individual, acting in the capacity of president or manager under the supervision of a group of individuals known as the board of directors, but ownership does not rest with that individual or group of individuals, but with the corporation itself. In the corporation the proprietorship is therefore vested in the stockholders acting as a "legal entity."

Proprietorship of Corporation Divided into Shares

The ownership of the stockholders in the proprietorship of the corporation is measured in terms of *shares*. At the time of its formation the corporation receives a charter from the state which grants it authority to issue a certain amount of capital stock. If only one kind of stock is issued, it is divided into equal shares. If the corporation is authorized to issue two or more kinds of stock, the shares of each kind may be of a different denomination, but all the shares of any one kind of stock must be of the same value.

The value of a share of stock as stated in the charter, is known as its *par value*. The par value of the stock is determined by dividing the total capital stock by the number of shares to be issued. If the total capital stock of a corporation is $50,000.00, divided into 500 shares, the par value of the stock is $100.00. In practice the reverse process is usually followed: the par value is first determined, and this is divided into the total stock to determine the number of shares to be issued. The par value of

stock is usually $100.00, although it may be of any par value desired, unless the law of the state, where the incorporation takes place, imposes limitations. Some companies, in order to encourage small investors, issue shares the par value of which is $5.00, $10.00, or $50.00, but in the majority of cases the par value is $100.00.

During recent years the laws of some states have authorized the issuance of stock of no par value. A number of large corporations have issued this kind of stock during the past few years. Under this plan, the capital stock of the corporation is divided into a certain number of shares, but no value is stated for each share. To determine its value, it is necessary to divide the proprietorship of the corporation by the total number of shares of no par value stock issued.

It is claimed that the employment of stock of no par value tends to prevent deception of the stockholders. When stock of a definite par value, for example, $100.00, is issued, there is a tendency on the part of stockholders who are not skilled in finance to consider it worth $100.00. As a matter of fact, its value may be very much above or below this amount. The proprietorship of a corporation is constantly fluctuating, and these fluctuations are reflected in the value of the capital stock of the business. Even though the par value as stated at the time of organization is the same as its real value, it will probably never be the same after the corporation commences to operate. If stock of no par value is used, it is necessary for the investor to determine its value by dividing the proprietorship of the corporation by the total shares issued. This not only may prevent deception, but it may also cause the investor to know more about the business in which he invests his funds.

More freedom can be exercised in establishing the sale price of no par value stock since the question of discount is not involved so long as it is sold at a price equivalent to the minimum established by state law. In most states this minimum is $5.00.

Ownership Evidenced by Stock Certificates

Each stockholder receives a certificate of stock which grants title to the number of shares he owns. This certificate declares the person named therein to be a shareholder in the corporation, and grants title to the stock stipulated on the face of the certificate. Further evidence of ownership of the stock is afforded by the record on the books of the corporation.

When a stockholder sells his stock, he fills in a blank form on the certificate, which authorizes the corporation to transfer his interest in the corporation, or that part of his interest which is stated, to the person whom he designates. The purchaser forwards the old certificate to the company which cancels it,

issues a new certificate to the stockholder and makes the proper entries on its record to show the transfer. The method by which the interests of stockholders are transferred serves to emphasize the continuity of the organization of the corporation. Stock certificates may be sold or otherwise transferred at the option of the owner. The personnel of the stockholders may thus be constantly changing, but the existence or operation of the corporation is not affected thereby.

Loss or destruction of a certificate does not affect ownership or the performance of any of the rights of a stockholder. Provision is usually made for the issue of a new certificate in such a case. The contents of the certificate will be discussed and illustrated in connection with the stock certificate book in Chapter XLIII.

Classification of Stock

All the stock issued by a corporation does not necessarily carry the same privileges and consequently may not be equally desirable as an investment. There are several bases of differentiation between shares of stock, such as distribution of profits, distribution of assets in case of dissolution, accumulation of dividends, etc. Based on these distinctions, stock may be variously classified. For the purpose of the present discussion, it will be sufficient to classify stock as:

1. Common.
2. Preferred.
    a. Participating or nonparticipating.
    b. Cumulative or noncumulative.

Common stock is that which has no preference with reference to dividends or assets over any other stock of the company. It confers upon its holders the right to participate in the management of the affairs of the company through the board of directors who are elected by the stockholders at the periodic meetings. It may have preference as to voting power. In some cases it is only the common stock which has the right to vote.

Preferred stock is that which has some kind of preference over the ordinary or common stock. The privileges accompanying preferred stock are not uniform, but there is one point of distinction which is applicable to all preferred stock, namely, preference as to distribution of profits. To understand the effect of this preference, it is necessary to consider briefly the method of distributing the profits of a corporation.

As a rule the profits of a corporation are divided yearly, although a quarterly or semi-annual distribution may be made. Whenever profits are divided among the stockholders, a *dividend* is said to be declared. Dividends can be declared only by the

board of directors and only by them when there are undivided profits to be distributed. A dividend is usually stated as a certain percentage of the par value of the stock on which it is paid. To illustrate: if the capital stock of a company is $100,000.00, and the annual profits distributed are $8,000.00, each share of stock of a par value of $100.00 will receive an eight per cent dividend. Usually all of the profits of the corporation are not distributed as dividends. Some part of the profits is retained in the business to provide for expansion and for possible losses which may occur in later years. When stock has no par value, the dividend is stated as so much per share.

To make their stock attractive to investors, companies often issue a portion of their stock with a preference as to dividends. This means that whenever profits are distributed, the preferred stockholders receive their share first. If the profits are insufficient to satisfy more than the claims of the preferred stockholders, the common stockholders receive nothing. For example: a company, capitalized at $100,000.00, has issued 500 shares of eight per cent preferred stock and 500 shares of common stock, each with a par value of $100.00. This means that in the distribution of dividends, the holders of these 500 shares of preferred stock would be paid an eight per cent dividend before anything could be paid to the common stockholders. If the profit for the year is $6,500.00 and the directors decide to distribute this amount to the stockholders, the owners of the preferred stock would receive a dividend of eight per cent or $4,000.00, leaving only $2,500.00 to be distributed among the common stockholders, who would thus get a dividend of only five per cent.

The common stock is sometimes more desirable than the preferred stock. This may be true if the holders of preferred stock are forbidden to share in the profits in excess of the amount of their preference. To illustrate: it may be assumed that a company is capitalized at $1,000,000.00, 5,000 shares of which are common stock and 5,000 shares are preferred at eight per cent, the latter being barred from participation in profits above the preferred rate. The profit for the year, $100,000.00, is distributed among the stockholders. Of this amount, $40,000.00 is required to pay the dividends on preferred stock. The balance, $60,000.00, is distributed among the common stockholders, with the result that this class of stock receives twelve per cent, a greater dividend than that allotted to the preferred stock.

At common law, preferred stock is participating unless otherwise stipulated in the articles of incorporation. This has been changed, however, by the statutes of some states. Preferred stock can be classified, therefore, into *participating* and *non-participating* stock. When the preferred stock is prohibited from

sharing in the profits above the preferred rate, this stock is said to be nonparticipating; otherwise, it is participating.

Sometimes the preferred stock is given a preference with reference to the distribution of assets. In case of the dissolution of a corporation, its net assets may not be sufficient to repay the investment of all the stockholders. In this event, payment will be made first upon that stock which has been issued with a priority of claim on assets.

Again, preferred stock may be either *cumulative* or *noncumulative*. If it be cumulative, the company is under obligation to pay the full amount of dividends named in the certificate. If this can not be paid out of the earnings of one year, the claim still stands against future earnings. If the stock be noncumulative, the stockholder must be satisfied with whatever profit the company makes, even though it be less than the fixed rate. In this case, the stockholder has no claim on future earnings. To illustrate: it may be assumed that A owns 1,000 shares of eight per cent preferred cumulative stock which would ordinarily net him an income of $8,000.00. If the company's earnings should at any time fall to a point where it could pay only $5,000.00 of the $8,000.00 due, the remaining $3,000.00 would be a claim against the profits of the company for the next year, or at such time as the earnings would be sufficient to enable it to pay the $3,000.00. On the other hand, if A's stock were noncumulative, he would have to be satisfied with the $5,000.00, and he would have no claim on future earnings.

Method of Showing Proprietorship

In a business owned by one individual, the proprietorship is vested in that one person, and, in making the Balance Sheet, his name is used to show his ownership of the capital invested, as shown in the following form:

C. S. KENWORTHY

BALANCE SHEET, JANUARY 2, 1926

Assets			*Liabilities*		
Cash	2,255	50	Notes Payable	2,000	
Notes Receivable	1,000		Accounts Payable	2,950	50
Accounts Receivable	5,565	50	Accrued Salaries	250	
Merchandise Inventory	15,379	50	Mortgage Payable	20,000	
Furniture and Fixtures	1,000				
Building	25,000		Total Liabilities	25,200	50
Land	25,000				
			Proprietorship		
			C. S. Kenworthy, Cap.	50,000	
Total Assets	75,200	50	Total Liab. and Prop.	75,200	50

When a profit or a loss occurs in such a business, the capital shown in the Balance Sheet is increased or decreased accordingly, unless the owner withdraws all the profit or makes up the deficit resulting from the loss.

In the Balance Sheet of a partnership, the proprietorship is shown in the same manner as on the Balance Sheet of a single proprietorship, except that each partner's interest is shown separately as in the following form:

WILSON & MEIERS

BALANCE SHEET, JANUARY 2, 1926

Assets		*Liabilities*	
Cash	5,050 25	Accounts Payable	2,505 25
Accounts Receivable	10,129 50	Notes Payable	10,000
Notes Receivable	5,000	Accrued Expenses	2,025 25
Merchandise Inventory	20,350 75	Mortgage Payable	30,000
Delivery Equipment	2,000		
Furniture and Fixtures	2,000	Total Liabilities	44,530 50
Building	50,000		
Land	50,000	*Proprietorship*	
		E. C. Wilson, Capital	60,000
		F. H. Meiers, Capital	40,000
		Total Proprietorship	100,000
Total Assets	144,530 50	Total Liab. and Prop.	144,530 50

A profit or loss in a partnership would be evidenced by changes in the amount of capital of each proprietor, as is the case in the single proprietorship.

As stated in the first section of this chapter, proprietorship in a corporation is vested in the stockholders considered collectively. Therefore the proprietorship is not shown on the Balance Sheet in the manner in which it is shown in the sole proprietorship and the partnership. It would obviously be impracticable to list the interest of each stockholder separately on the Balance Sheet, since the number of stockholders is usually too great. When the stock issued has par value, the par value of all the stock issued to stockholders is entered as one item under the heading of Capital Stock. When the stock issued does not have par value, the item Capital Stock in the proprietorship section of the Balance Sheet is the same as the amount received from the sale of the stock. If the proprietorship is greater than that represented by the capital stock, it is shown as a separate item under the title "Surplus." The Balance Sheet on page 611 illustrates the method of showing the proprietorship of a corporation.

NORTHWESTERN MILLING COMPANY

BALANCE SHEET, JANUARY 2, 1926

Assets			*Liabilities*		
Cash	5,565	25	Notes Payable	10,000	
Notes Receivable	5,000		Accounts Payable	3,521	50
Accounts Receivable	12,125	50	Accrued Expenses	1,219	50
Merchandise Inventory	20,050	25	Mortgage Payable	50,000	
Furniture and Fixtures	2,000				
Delivery Equipment	5,000		Total Liabilities	64,741	
Machinery and Tools	75,000				
Buildings	140,000		*Proprietorship*		
Land	25,000				
			Capital Stock	200,000	
			Surplus	25,000	
			Total Proprietorship	225,000	
Total Assets	289,741		Total Liab. and Prop.	289,741	

If the profit is greater than the amount paid as dividends, the excess is added to the surplus; and conversely, if a loss has been sustained, Surplus account will be decreased accordingly.

As a protection to creditors, the law forbids the distribution of the original capital among the stockholders, except in case of liquidation, which accounts for the method just shown of keeping the capital stock at a fixed amount. If, for any reason, it is deemed necessary to change the capital stock, such a change can be effected only by securing a revision of the charter. Unless this is done, all changes in proprietorship must be shown by an increase or decrease of surplus.

Value of Stock

The value of the stock of a corporation is always spoken of in terms of a share. It may have four different values: par value, market value, book value, and real value.

Par Value is the value assigned to each share when the charter is issued, and is stated on the certificate of stock. Par value and face value are sometimes used as synonymous. No par value stock does not have par value, but has the other values discussed below.

Book Value. Capital stock usually does not represent the entire proprietorship. There will usually be a surplus, which added to the capital stock, equals the proprietorship. While the actual proprietorship changes, the number of shares remains fixed; hence it is clear that the value of each share, measured in amount of proprietorship, or net worth, will be different from the par or face value. Thus, if the books show a surplus of $25,000.00 and a capital stock of $100,000.00 (1,000 shares at $100.00 each, par) the value of each share is $125.00. This is

called *book* value. Book value, therefore, may be defined as the value of stock as shown by the books, or proprietorship (net worth) divided by the number of shares.

Market Value. When shares are bought and sold, the price does not always conform either to the book value or to the par value. Thus, in the case just cited, if a stockholder were offering the stock on the market, he probably would not receive exactly $125.00 for each share. If the company were making big profits and could declare large dividends, the stockholder could probably get more than $125.00, say $127.50 or $130.00. This is termed selling at a *premium.* If conditions were the reverse, he would probably have to sell for less than the book value, or at a *discount.* The value placed upon the stock in the stock market or wherever stocks are exchanged, is called the *market* value.

Real Value. If a company is dissolving voluntarily or if it be compelled to dissolve, its assets must be liquidated, or converted into cash within a limited time. The price obtained for its assets through this voluntary or forced sale will usually be somewhat less than the amount at which the assets are recorded on the books. The disposal of the assets for less than book value will decrease the proprietorship with a consequent decrease in the book value of the capital stock. The value obtained for the stock under these conditions is known as the *real* or *liquidation* value. It will be the same as the book value if the book value of the assets is realized.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Carter and Dixon are members of a partnership. Later the partnership is incorporated. Explain what changes, if any, occur with reference to the ownership of the business.

— 2 —

Explain the part that the possession of stock plays in Carter's and Dixon's ownership in the corporation.

— 3 —

Benedict buys 100 shares of stock valued at $100.00 par. He pays $94.50 for each share. (a) How is it possible to have these two values? (b) Which is the more important? Why?

— 4 —

Peters, a friend of Benedict, buys "no par value" stock of another corporation at $98.00 per share. How is this value obtained?

— 5 —

What information would you need in order to determine whether Peters' or Benedict's stock is the better investment?

— 6 —

Seven certificates of stock representing A. R. Green's interest in a corporation are stolen. (a) What protection has Green that another person will not use his certificates? (b) What protection has the corporation from the person holding the certificates who presumably will represent himself in Green's place?

— 7 —

(a) Compare the continuity of life in a partnership and in a corporation. (b) Which form of organization, as far as this consideration is concerned, is the more desirable? Why?

— 8 —

"All the stock issued by a corporation does not necessarily carry the same privileges and consequently may not be equally desirable as an investment." (a) Name, according to privileges, the kinds of stock you know. (b) What elements in these various kinds of privileges make for desirability or undesirability?

— 9 —

A company is capitalized at $2,500,000.00, 10,000 shares of which are noncumulative preferred stock at seven per cent and 15,000 shares are common. The par value of both the common and the preferred stock is $100.00. The first year the profit of the corporation is $60,000.00; the second year, $100,000.00;

and the third year, $125,000.00. The board of directors agrees to reserve ten per cent of the profits of each year and to distribute the remainder as dividends. (a) Which stock secures the greater rate of return? (b) Show the relation of dividends on common stock to profits. (c) For what reasons do you think investors buy common stock? (d) Why do some buy preferred stock?

— 10 —

"As a protection to creditors, the law forbids the distribution of the original capital among the stockholders." (a) How does this regulation of the law protect the creditors? (b) Would this regulation render any service to the corporation itself?

— 11 —

Compare the methods of distributing profits in a sole proprietorship, partnership, and corporation. Answer with particular reference to the purpose of the surplus in a corporation.

— 12 —

(a) Explain the circumstances under which an investor would be interested in knowing (1) par value of stock, (2) book value, (3) market value, (4) real value. (b) Would all these values be needed to know at what price to buy the stock?

— 13 —

How are the quotations for stock listed in the financial section of the newspaper obtained and what value do they represent?

— 14 —

The Anderson Manufacturing Company has an authorized capital stock of $100,000.00, representing 1,000 shares, all of which have been issued. The surplus of the company is $15,000.00. How would these facts be shown on the Balance Sheet?

— 15 —

A. L. Macon owns one share of stock in the Anderson Manufacturing Company (Question 14). What is the par value of this stock? the book value?

— 16 —

A. L. Macon sells his stock in the Anderson Manufacturing Company for $122.50. Assuming that he sold at market price, what was the market quotation on this stock?

— 17 —

If the Anderson Manufacturing Company were forced to liquidate, about what would you expect the real value of their stock to be, basing your judgment upon the sale of Macon's stock (Question 16)? Would it be likely to exceed the book value? the par value?

LABORATORY MATERIAL

Exercise No. 165

H. B. Goodall, sole owner of a wholesale grocery business, decides to incorporate under the name of The Goodall Grocery Company. He and four others, whom he has interested in the venture, apply for a charter authorizing the issue of 1,500 shares of capital stock with a par value of $100.00 each. Mr. Goodall is to receive stock in payment for his interest in the business. The other four incorporators agree to buy stock at par as follows: S. T. Hall, 250 shares; J. C. Goldey, 200 shares; D. H. Gill, 100 shares; R. B. Martin, 100 shares.

On December 31, the following Trial Balance, showing a record of one year's operations, is taken from the books of H. B. Goodall:

H. B. GOODALL

TRIAL BALANCE, DECEMBER 31, 192

Cash	15,311	12		
Notes Receivable	4,875			
Accounts Receivable	55,838	15		
Reserve for Bad Debts			109	60
Merchandise Inventory	37,040	12		
Office Equipment	2,700			
Res. for Dep. of Office Equipment			270	
Store Equipment	8,750			
Res. for Dep. of Store Equipment			1,093	75
Office Supplies	1,201	66		
Store Supplies	1,816	03		
Prepaid Insurance	726	90		
Notes Payable			15,000	
Accounts Payable			23,496	50
H. B. Goodall, Capital			73,115	04
Sales			154,286	94
Sales Returns and Allowances	845	20		
Purchases	83,756	33		
Freight and Drayage In	7,614	21		
Purchases Returns and Allowances			427	15
Sales Salaries	20,882	58		
Advertising	8,375			
Miscellaneous Selling Expense	104	30		
Office Salaries	13,048	35		
Rent	5,000			
Miscellaneous General Expense	396	29		
Purchases Discount			1,465	06
Interest Earned			87	54
Sales Discount	964	09		
Interest Cost	106	25		
	269,351	58	269,351	58

The following supplementary data require adjustment of the accounts:

(a) Merchandise inventory December 31, $38,987.30.

(b) Accrued interest on notes receivable, $36.56.

(c) Accrued interest on notes payable, $90.00.

(d) Accrued salaries: sales salaries, $185.82; office salaries, $126.68.

(e) Supplies on hand: office supplies, $145.50; store supplies, $287.40.

(f) Insurance expired: on store equipment and merchandise, $313.50; on office equipment, $49.95.

(g) Depreciation: on office equipment, 10%; on store equipment, 12½%.

(h) Bad debts: 1% of accounts receivable is to be added to the reserve.

INSTRUCTIONS: 1. Prepare journal entries to record the adjustments.

2. Prepare a Working Sheet from the Trial Balance and the adjusting entries.

3. Prepare a Balance Sheet and a Statement of Profit and Loss for H. B. Goodall.

4. Assuming that the corporation receives its charter on January 2 and that the stock is issued as agreed, prepare a Balance Sheet showing the financial condition of the corporation at the beginning of business. Retain this Balance Sheet for use in the next exercise.

Exercise No. 166

At the end of the first year's operations, the following Balance Sheet in condensed form was prepared by the bookkeeper of The Goodall Grocery Company (Exercise No. 165):

THE GOODALL GROCERY COMPANY

BALANCE SHEET, DECEMBER 31, 192

Current Assets........	126,172	74	Current Liabilities....	37,998	28
Fixed Assets..........	75,983	75	Capital Stock........	150,000	
Deferred Charges......	887	98	Surplus..............	15,046	19
Total Assets..........	203,044	47	Total Liab. & Prop....	203,044	47

INSTRUCTIONS: 1. Assuming that each stockholder owns the same number of shares at the end of the year that he owned at the beginning, as given in Exercise No. 165, ascertain (a) the par value and (b) the book value of each stockholder's interest as of December 31.

2. State the amount each stockholder would receive if all the profits were distributed as dividends.

Exercise No. 167

B. C. White and F. R. Blake, operating the W & B Bus Lines as partners, decide to reorganize their business as a corporation. A charter is secured authorizing the issue of 700 shares of stock of $50.00 par value. The application for a charter is signed by the following persons, and stock is subscribed for as follows: B. C. White, 300 shares; F. R. Blake, 300 shares; John C. Davis, 50 shares; R. E. Montague, 30 shares; C. F. Burbank, 20 shares. White and Blake are to accept the stock for which they have subscribed in payment for their respective interests in the business, except that if the par value of this stock is greater than their proprietorship, they are to pay cash for the difference, and if the par value is less than their proprietorship, the corporation is to pay them cash for the difference. The other subscribers pay cash for their subscriptions, and all the stock is issued.

The Trial Balance prepared from the books of the partnership at the time of incorporation is as follows:

WHITE & BLAKE

TRIAL BALANCE, MARCH 31, 192

Cash in Bank	10,298	69		
Drivers Change Funds	100			
Office Petty Cash Fund	25			
Buses and Equipment	29,875			
Res. for Dep. of Buses and Equipment			12,945	83
Office Equipment	600			
Res. for Dep. of Office Equipment			130	
Licenses Prepaid	150			
Insurance Prepaid	1,324	48		
Rent Prepaid	5,000			
Gasoline Coupon Books	685			
Sundry Bus Supplies	196	43		
Office Supplies	213	85		
Notes Payable			15,550	
Accounts Payable			2,145	36
B. C. White, Capital			6,874	19
B. C. White, Personal	545			
F. R. Blake, Capital			6,554	19
F. R. Blake, Personal	225			
Receipts from Fares			6,686	60
Drivers' Wages	2,000			
Drivers' Bonuses	285	15		
Repairs on Buses	82	60		
Office Salaries	375			
Sundry Operating Expenses	262	47		
Income from Bus Advertising Space			1,657	50
Interest Cost	300			
	52,543	67	52,543	67

Supplementary data which require adjustment of the accounts are given on page 618.

(a) Depreciation: buses and equipment, 20% yearly; office equipment, 10% yearly (depreciation for the month of March only is to be recorded).

(b) Expirations: licenses expired, $37.50; insurance on buses and equipment expired, $127.08, and on office equipment expired, 93¢; rent for one month expired, $500.00.

(c) Supply Inventories: gasoline coupon books on hand, $150.00; sundry bus supplies on hand, $30.48; office supplies on hand, $117.65.

(d) Interest Cost: interest on notes payable paid in advance, $225.00; interest accrued on notes payable, $6.60.

(e) Pay Roll: drivers' wages accrued, $250.00; office salaries accrued, $46.88.

(f) Income from sale of advertising space in buses, received in advance, $849.50.

INSTRUCTIONS: 1. Prepare journal entries to record the adjustments.

2. Prepare a Working Sheet from the Trial Balance and the adjusting entries.

3. Prepare a Balance Sheet and a Statement of Profit and Loss for White & Blake; profits are to be shared equally.

4. Assuming that the corporation receives its charter on April 1 and that the stock is issued as agreed, prepare a Balance Sheet showing the financial condition of the corporation at the beginning of business. Retain this Balance Sheet for use in the next exercise.

Exercise No. 168

At the end of the first month's operations, the following Balance Sheet in condensed form was prepared by the bookkeeper of The White Transportation Company (Exercise No. 167):

THE WHITE TRANSPORTATION COMPANY

BALANCE SHEET, APRIL 30, 192

Current Assets	11,459	71	Current Liabilities	2,137	14
Fixed Assets	22,293	33	Deferred Credits	785	
Deferred Charges	6,447	55	Capital Stock	35,000	
			Surplus	2,278	45
Total Assets	40,200	59	Total Liab. & Prop.	40,200	59

INSTRUCTIONS: 1. Assuming that each stockholder owns the same number of shares at the end of April that he owned at the end of March, as given in Exercise No. 167, ascertain (a) the par value and (b) the book value of each stockholder's interest as of April 30.

2. State the amount each stockholder would receive if a dividend of 1% were declared.

CHAPTER XLI

THE FORMATION AND OPERATION OF A CORPORATION

Formation of a Corporation

A corporation is "authorized by law, and created by charter." Since the corporation is created through the permission and under the supervision of governmental authority, some legal formalities must be met before a charter will be granted. Although these legal requirements vary somewhat in the different states, it is possible to indicate their general nature.

In the early history of the development of the corporate form, special action by the state legislature was required for the formation of each corporation. With the rapidly increasing number of applications for incorporation, this method soon grew burdensome, and in its place were substituted general laws or enabling acts, setting forth the provisions under which corporations might be formed. Under present laws, state control over incorporations is usually delegated to the Secretary of State and the State Treasurer. Application for permission to incorporate must be submitted to the Secretary of State, who acts for the state in passing favorably or unfavorably upon the legality of the proposed organization. The duties delegated to the State Treasurer are those which have to do with the collection of organization fees and taxes. In some states the application for incorporation is addressed to the Governor of the state and must be approved by him. In a few states there is a Commissioner of Corporations or an officer bearing a similar title, who has the authority with reference to corporations which is usually vested in the Secretary of State.

The process of organization varies in different states, but the method which is becoming typical involves two steps: (a) the securing of some subscriptions and the effecting of a tentative organization; (b) the securing of the permission of the state to commence business operations. The law usually stipulates what the application for incorporation must contain. In many cases the state merely approves the application for incorporation, and it then becomes the charter of the corporation.

The corporation must conform to the laws relating to incorporation in the state where it is organized. It is also subject to that general control which any state exercises over all individuals and business organizations, through its constitution and such statutes as relate to business activities in general. In most states some laws have been passed which relate to corporations only. Frequently it is necessary or advantageous for a company to operate in more than one state. In such a case, the corporation must conform to the regulations of the Interstate Commerce Commission and to the corporation laws of all states into which it extends its business.

Certificate of Incorporation

The charter of a corporation states the powers which it possesses and the limitations under which it must operate. As previously explained, the laws of the state specify the form of application which a proposed corporation must submit, and if this application is approved, it becomes, in many states, the charter of the corporation. The provisions of law governing the form of the application for incorporation are quite important, since they must be strictly complied with to obtain the approval of the state. These provisions vary in different states, but in general they include all the important features peculiar to a corporation, such as the name, purpose, duration, location and capitalization.

To show more clearly the nature of the data which may be required in the application for incorporation, the following quotation from the statutes of the State of Illinois is given:

"A corporation may be formed for any lawful purpose (except banking, insurance, real estate brokerage, operation of railroads, and loaning money) whenever three or more persons, citizens of the United States, at least one of whom shall be a citizen of Illinois, shall sign, seal, and acknowledge a statement of incorporation setting forth:

(1) Names and post office addresses of the incorporators.

(2) Name of the proposed corporation.

(3) A clear and definite statement of the object or objects for which it is formed.

(4) The period of duration.

(5) Location of the principal office in this State, giving town or city, street and number, if any.

(6) Number of shares into which the capital stock is to be divided, whether all or part of same shall have par value, and if so, the par value thereof, which shall not be less than $5.00 nor more than $100.00 a share, and whether all or part of the same shall have no par value, and if there is to be more than one class of stock created, a description of different classes, number of shares of each, and relative rights, interests and preferences each class shall represent.

(7) Names and addresses (give street and number) of the original subscribers to the capital stock and amount subscribed by each.

(8) Total amount of authorized capital stock.

(9) Amount of such stock it is proposed to issue at once (which shall not be less than $1,000.00).

(10) The payment of at least one-half of the capital stock having a par value and of not less than $5.00 per share for each share of capital stock having no par value, which it is proposed to issue at once, with a description of the nature and value of the property, if any, paid for such capital stock.

(11) Number, names, and post office addresses of directors by street and number, at least one of whom shall be a resident of this State, and the term for which elected.

(12) Any other provisions not inconsistent with law, for the regulation of the business and the conduct of affairs of the corporation, and any provisions creating, defining, limiting, and regulating the powers of the corporation, the directors and the stockholders, or any class or classes of stockholders.

The statutes of the State of New York provide:

"Except as provided in section 2a of this chapter, three or more persons may become a stock corporation for any lawful business purpose or purposes, by making, signing, acknowledging, and filing a certificate which will contain:

(1) The name of the proposed corporation.

(2) The purpose or purposes for which it is to be formed.

(3) The amount of capital stock, and if any portion be preferred stock, the preferences thereof.

(4) The number of shares of which the capital stock shall consist, the value of which shall not be less than five nor more than one hundred dollars, and the amount of capital not less than five hundred dollars, with which the said corporation will begin business. (By amendment of the original law, stock may now be issued which has no par value.)

(5) The city, village, or town in which its principal business office is to be located. If it is to be located in the City of New York, the borough there in which it is to be located.

(6) Its contemplated duration. This may be made perpetual.

(7) The number of its directors, not less than three.

(8) The names and post office addresses of the directors for the first year.

(9) The names and post office addresses of the subscribers to the certificate of incorporation and the number of shares in the corporation subscribed by each.

The certificate must be signed by the three or more persons who make application for the charter and their signatures acknowledged by a notary public or other designated official.

The Opening Entries

When the corporation receives its charter, it is then necessary to open the books of record. The incorporators or organizers of the corporation will, in most cases, have performed some transactions prior to the granting of the charter and should keep a record of them, but these transactions are not the transactions of the corporation; therefore no entries should be made on the records of the corporation until the charter is obtained.

The opening entries of a corporation are similar to those of other types of business organizations in that they show the assets that are contributed toward the organization, and the liabilities, if any, that the corporation is to assume. The proprietorship of the corporation at the time of its formation is shown as one item, and is not credited to the individual members of the organization as in the case of a partnership.

The simplest case which can be taken by way of illustration is that of a corporation whose authorized capital stock has all been subscribed and paid for in cash. Assuming that the authorized capital stock of the corporation is $500,000.00, and that it is all common stock, a memorandum entry would be made in the general journal as follows:[1]

JANUARY 2, 192

The Farwell Manufacturing Company has been incorporated under the laws of the State of New York, with an authorized capital stock of five hundred thousand dollars ($500,000.00) divided into five thousand (5,000) shares of common stock, of the par value of $100.00 a share, with express and implied power to conduct a general manufacturing business.		

The sale of the capital stock would be recorded as follows:

JANUARY 2, 192

Cash	500,000	
Capital Stock		500,000
For issue of capital stock in consideration of cash subscriptions to 5,000 shares.		

The ledger accounts for this entry would be simply the Cash account showing a debit of $500,000.00 and the Capital Stock account showing a credit of $500,000.00.

[1]For convenience all the entries given to illustrate the opening entries of a corporation will be shown in journal form. Some of these would normally be entered in the cash records.

If some subscriptions were paid with property, such as land, buildings, machinery, tools, etc., to be retained for use in the business, the opening entry would show the various assets as follows:

JANUARY 2, 192

Cash	300,000	
Machinery	100,000	
Buildings	70,000	
Land	30,000	
Capital Stock		500,000
For issue of capital stock in consideration of cash subscriptions to 3,000 shares and of property, plant, and sundry assets, acquired from J. H. Long as per contract on file.		

It is not necessary to give the names of the stockholders in the explanation since full data concerning their subscriptions will be in the minute book, stock ledger, and stock certificate book which are discussed in the next chapter.

In this illustration it has been assumed that all the stock authorized has been subscribed and issued. In many cases this is not true. For example, the charter of the J. A. Cook Company may authorize the issuance of stock to the amount of $500,000.00, and the stockholders or board of directors may vote to sell only $400,000.00 at the time of the organization, retaining the remaining $100,000.00 for sale at a later time when more funds may be needed.

It is often desirable to have the charter authorize the issuance of more stock than is to be issued at the time of the formation of the corporation. This relieves the company of the necessity of applying for a change of charter at such times as it may wish to increase its capital. For example, if the charter of the J. A. Cook Company authorizes an issue of only $400,000.00 and the company at some later time needs $100,000.00 additional capital, it will have to go through the formalities of having its charter changed to read $500,000.00. However, if the charter authorizes the issuance of $500,000.00 and only $400,000.00 is issued, the remaining $100,000.00 can be issued at any time desired without consulting the state authorities. Usually the consent of the majority and in some cases the consent of two-thirds or three-fourths of the stockholders must be obtained before the charter can be changed, and this may add to the difficulty of obtaining an increase in the stock.

Assuming in the case cited that $100,000.00 of the stock is not issued at the time of organization, the opening entries may be made in two ways. The first method is illustrated at the top of page 624.

July 1, 192

Unissued Capital Stock..............	500,000	
Capital Stock..................		500,000
The J. A. Cook Co. is incorporated with an authorized capital stock of $500,000.00.		
1		
Cash............................	400,000	
Unissued Capital Stock..........		400,000
To record the sale and issue of 4,000 shares of stock for cash.		

The ledger accounts resulting from these entries would be:

Capital Stock

					192 July	1		J1	500,000

Unissued Capital Stock

192 July	1		J1	500,000	192 July	1		C2	400,000

Cash

192 July	1		C2	400,000					

In making a Balance Sheet, the debit balance of the Unissued Capital Stock account would not be treated as an asset, but would be shown as a deduction from the Capital Stock credit of $500,000.00 as follows:

Capital Stock Authorized............	500,000	
Capital Stock Unissued..............	100,000	
Capital Stock Outstanding.......		400,000

The second method of recording these transactions would be as follows:

July 1, 192

Cash............................	400,000	
Capital Stock..................		400,000
Issued stock on receipt of cash in payment.		

By this method the unissued capital stock is not shown on the books and the Capital Stock account shows only the amount of stock which has been issued. On the Balance Sheet the authorized, the unissued, and the outstanding capital stock should be shown the same as by the first method, since this is information

of importance to those who are studying the financial condition of the business as reflected by its Balance Sheet.

The opening entries in the preceding illustrations are the simplest which can be used for recording the transactions performed. Some accountants prefer that the opening entries indicate fully the various steps involved in the selling of the capital stock and the issuance thereof. To do this, it is necessary to set up at least two additional accounts. To illustrate, the opening entries for the J. A. Cook Company may be made as follows:

JULY 1, 192

Unissued Capital Stock..............	500,000	
Capital Stock..................		500,000
To record the 5,000 shares of stock authorized by the charter.		
1		
Subscriptions Receivable.............	400,000	
Capital Stock Subscribed........		400,000
To record the subscriptions to 4,000 shares of stock.		
1		
Cash............................	400,000	
Subscriptions Receivable.........		400,000
To record the payment by subscribers for stock subscribed.		
1		
Capital Stock Subscribed............	400,000	
Unissued Capital Stock..........		400,000
To record issue of stock to subscribers.		

Since the debits and credits to the Subscriptions Receivable and the Capital Stock Subscribed accounts are equal, the final results in this case are the same when these accounts are not used. If, however, the subscriptions are only partly paid, the amount owed by subscribers as shown by the balance of the Subscriptions Receivable account would appear as an asset on the Balance Sheet, and the balance of the Capital Stock Subscribed account would appear as an addition to stock outstanding, their sum being the capital stock outstanding and subscribed.

Premium and Discount on Capital Stock

Capital stock is sometimes sold for more or less than its par value. In any case, the Capital Stock and Unissued Capital Stock accounts show the par value of the stock, and the difference between the par value and the selling price is recorded in a premium or a discount account. For example, if the J. A. Cook Co., whose opening entries are shown on page 624, sells the 4,000 shares of stock at $105.00 a share instead of at par, the entry, in journal form, to record the sale of the stock will be as shown on page 626.

JULY 1, 192

Cash	420,000	
Unissued Capital Stock[1]		400,000
Premium on Capital Stock		20,000
To record the sale and issue of 4,000 shares of stock at $105.00 a share, par $100.00.		

If the statutes under which the corporation was organized do not prohibit the issuance of stock at less than par value, the 4,000 shares of stock may be sold, say, at $98.00 a share instead of par. The entry in journal form to record the sale of the stock in this case will be as follows:

JULY 1, 192

Cash	392,000	
Discount on Capital Stock	8,000	
Unissued Capital Stock[1]		400,000
To record the sale and issue of 4,000 shares of stock at $98.00 a share, par $100.00.		

On the Balance Sheet, Premium on Capital Stock is added, and Discount on Capital Stock is deducted, from the par value of capital stock outstanding, the result being the original investment of the stockholders.

Method of Handling No Par Value Stock

The preceding discussion applies to capital stock which has par value. In the case of no par value stock, the authorized capital stock and the unissued stock can not be entered on the books, since it has no recordable value until sold. At the time it is sold, the amount received is credited to the Capital Stock account. Since the stock does not have par, neither premium nor discount on stock needs to be considered. For example, if the authorized capital stock is 2,000 shares of no par value stock and 1,000 shares of this stock are sold at $98.00 a share, the entry in journal form would be as follows:

JULY 1, 192

Cash	98,000	
Capital Stock		98,000
To record the sale and issue of 1,000 shares of no par value stock at $98.00 a share.		

[1]In the above entries, it is assumed that the authorized capital stock was recorded as in the first entry on page 624. If this is not the case, and the Capital Stock account shows only the stock issued as in the method explained at the bottom of page 624, the Capital Stock account would be credited in place of the Unissued Capital Stock account in the above entries.

On the Balance Sheet, no par value stock may be shown as follows:

Capital Stock—No Par Value:		
Authorized.........	2,000 shares	
Unissued...........	1,000 shares	
Outstanding......	1,000 shares	98,000

Similarly, subscriptions for stock of no par value are entered on the books at the sale price of the stock.

Changing from a Partnership to a Corporation

From a legal point of view, changing from a partnership to a corporation necessitates (a) the dissolution of the partnership, which is usually effected by an agreement of the partners, and (b) the fulfillment of all requirements imposed by the state upon the incorporators, which would be evidenced by a charter granted by the state. From an accounting point of view, two things are necessary: (a) to close the books of the partnership according to the partnership agreement, and (b) to open the books of the corporation in compliance with the provisions of the charter.

To make these processes more concrete, it may be assumed that R. C. Manning and A. L. Manning are partners in the manufacturing business of R. C. Manning & Son, and have associated themselves with M. H. Strickland and W. J. Hamilton to form a corporation, known as the Manning Manufacturing Company. The Balance Sheet of R. C. Manning & Son on the date of incorporation is as follows:

R. C. MANNING & SON

BALANCE SHEET, MARCH 1, 192

Assets		*Liabilities*	
Cash.................	10,123 41	Accounts Payable......	55,261 42
Accounts Receivable...	40,231 56	Notes Payable.........	64,550 50
Merchandise Inventory	58,115 95		
Office Equipment......	15,215 50	Total Liabilities.....	119,811 92
Delivery Equipment...	21,125 50		
Machinery............	100,000	*Proprietorship*	
Buildings.............	50,000		
Land.................	25,000	R. C. Manning, Capital	120,000
		A. L. Manning, Capital.	80,000
		Total Proprietorship.	200,000
Total Assets..........	319,811 92	Total Liab. and Prop...	319,811 92

The corporation is to have an authorized capital stock of $500,000.00 of which $400,000.00 is to be common stock and $100,000.00 preferred stock. The corporation is to take over

the assets and assume the liabilities of R. C. Manning & Son at book value and to issue to R. C. Manning and A. L. Manning common stock to the amount of their net worth in payment for their business. M. H. Strickland is to contribute $75,000.00 of manufacturing supplies and to receive payment in common stock. W. J. Hamilton is to purchase $50,000.00 worth of common stock for cash. The preferred stock is to be sold for cash.

To close the books of R. C. Manning & Son the following entries are necessary:

March 1, 192

Manning Manufacturing Company	319,811 92	
Cash		10,123 41
Accounts Receivable		40,231 56
Merchandise Inventory		58,115 95
Office Equipment		15,215 50
Delivery Equipment		21,125 50
Machinery		100,000
Buildings		50,000
Land		25,000
To record the sale of the assets of the business to the Manning Manufacturing Company.		
1		
Accounts Payable	55,261 42	
Notes Payable	64,550 50	
Manning Manufacturing Company		119,811 92
To record the assumption of the liabilities of the business by the Manning Manufacturing Company.		
1		
Stock, Manning Manufacturing Co.	200,000	
Manning Manufacturing Company		200,000
To record the receipt of capital stock from the Manning Manufacturing Company in payment of the amount due for partnership business.		
1		
R. C. Manning, Capital	120,000	
A. L. Manning, Capital	80,000	
Stock, Manning Mfg. Co.		200,000
To record distribution of stock of the Manning Manufacturing Company to the partners.		

When these entries are posted, it will be noted that each asset and liability account as well as the partners' accounts will be in balance and can be closed. The accounts will then be completely closed.

To open the books of the corporation, account will have to be taken not only of the assets and liabilities received from R. C. Manning and A. L. Manning, but also of the manufacturing supplies amounting to $75,000.00 invested by M. H. Strickland and the cash amounting to $50,000.00 invested by W. J. Hamilton. These four persons are the incorporators, and retain all the common stock which is issued, amounting to $325,000.00. The remainder of the common stock is unissued. The preferred stock is sold and paid for in cash.

The first entry of the new corporation will show the authorized issue of capital stock:[1]

MARCH 1, 192

	Unissued Capital Stock, Common	400,000	
	Unissued Capital Stock, Preferred	100,000	
	Capital Stock, Common		400,000
	Capital Stock, Preferred		100,000
	To record the authorized capital stock.		

The next entry will show the subscriptions to common stock:

	1		
	Common Stock Subscriptions Rec.	325,000	
	Common Stock Subscribed		325,000
	To record the subscriptions to the common stock.		

It is then necessary to record the receipt of the assets and liabilities of R. C. Manning & Son and stock given in payment.

	1				
	Cash	10,123	41		
	Accounts Receivable	40,231	56		
	Merchandise Inventory	58,115	95		
	Office Equipment	15,215	50		
	Delivery Equipment	21,125	50		
	Machinery	100,000			
	Buildings	50,000			
	Land	25,000			
	R. C. Manning & Son, Vendors			319,811	92
	To record purchase of assets of R. C. Manning & Son.				
	1				
	R. C. Manning & Son, Vendors	119,811	92		
	Accounts Payable			55,261	42
	Notes Payable			64,550	50
	To record the liabilities assumed from R. C. Manning & Son.				

[1]An introductory statement similar to that shown on page 622 may precede the first entry.

	1			
	R. C. Manning & Son, Vendors.......	200,000		
	Common Stock Subscriptions Rec.			200,000
	To show payment of subscription of R. C. Manning & Son by transfer of their business.			
	1			
	Common Stock Subscribed...........	200,000		
	Unissued Capital Stock, Common			200,000
	To record issue of common stock to R. C. Manning and A. L. Manning on transfer of assets of their business to the corporation.			

The following entries will show investments of Strickland and Hamilton and the issue of stock to them:

	1			
	Manufacturing Supplies.............	75,000		
	Common Stock Subscriptions Rec.			75,000
	To show payment of M. H. Strickland for subscription to common stock by transfer of manufacturing supplies.			
	1			
	Cash............................	50,000		
	Common Stock Subscriptions Rec.			50,000
	To show full payment by W. J. Hamilton for stock subscribed by him.			
	1			
	Common Stock Subscribed...........	125,000		
	Unissued Capital Stock, Common			125,000
	To record issue of common stock to M. H. Strickland and W. J. Hamilton on receipt of manufacturing supplies and cash respectively in payment.			

A final entry will show the receipt of the additional working capital secured by the sale of preferred stock:

	1			
	Cash............................	100,000		
	Unissued Capital Stock, Preferred			100,000
	To show the issue of 6% cumulative preferred stock on receipt of cash.			

The Capital Stock, Unissued Capital Stock, Subscriptions Receivable, and Capital Stock Subscribed accounts in the ledger will appear as follows:

Capital Stock — Common

					192 Mar.	1		J1	400,000

CAPITAL STOCK — PREFERRED

					192 Mar.	1		J1	100,000

UNISSUED CAPITAL STOCK — COMMON

192 Mar.	1		J1	400,000	192 Mar.	1		J1	200,000
						1		J1	125,000

UNISSUED CAPITAL STOCK — PREFERRED

192 Mar.	1		J1	100,000	192 Mar.	1		C2	100,000

COMMON STOCK SUBSCRIBED

192 Mar.	1		J1	200,000	192 Mar.	1		J1	325,000
	1		J1	125,000					
				325,000					325,000

COMMON STOCK SUBSCRIPTIONS RECEIVABLE

192 Mar.	1		J1	325,000	192 Mar.	1		J1	200,000
						1		J1	75,000
						1		C2	50,000
				325,000					325,000

Combining these accounts with the asset and liability accounts showing the assets and liabilities taken over from R. C. Manning & Son, the Balance Sheet of the new organization will be as follows:

MANNING MANUFACTURING COMPANY

BALANCE SHEET, MARCH 1, 192

Assets			*Liabilities*		
Cash	160,123	41	Accounts Payable	55,261	42
Accounts Receivable	40,231	56	Notes Payable	64,550	50
Finished Goods Inv.	58,115	95	Total Liabilities	119,811	92
Manufacturing Supplies	75,000		*Proprietorship*		
Office Equipment	15,215	50			
Delivery Equipment	21,125	50	Com. Stock Authorized	400,000	
Machinery	100,000		Less Unissued Com. Stk.	75,000	
Buildings	50,000				
Land	25,000		Common Stock Issued	325,000	
			Preferred Stock Authorized and Issued	100,000	
			Total Stock Issued	425,000	
Total Assets	544,811	92	Total Liab. and Prop.	544,811	92

Operations of a Corporation

A corporation is ready to carry on its operations after a part or all of its stock has been sold, the charter obtained and the preliminary data recorded in the books of account. The fact that a business is incorporated does not mean that its activities are distinctly different from those of a sole proprietorship or partnership. No matter what the legal organization of an enterprise, it must buy to sell, or produce to sell; it must incur expenses and realize profits, if it is to continue in business; and these various transactions must be recorded on the books of account in order to know the condition of the business at all times. Consequently, the sole proprietorship, partnership, and corporation have many problems in common.

The difference in legal status between the corporation and the other forms of business organization does affect to some extent its operations. Since its existence is the result of securing a charter, it necessarily is subject to the regulations and provisions set forth in that document. It is also subject to the national and state laws relating to corporations. As long as the corporation acts in accord with the laws and its charter and by-laws, it is proceeding on a legitimate basis. Stating it conversely, the corporation acts as does a sole proprietorship or partnership, except when it is subject to the regulations imposed on it because of the nature of its legal entity. Those regulations arise from federal and state laws, the charter and by-laws of the corporation, and the rulings of the board of directors.

The immediate concern of the executives of a corporation is with the regulations of the charter and by-laws, although they must exercise care not to act in conflict with state and national laws. In carrying out the provisions contained therein, the board of directors is directly concerned. From the point of view of records and reports, it is necessary for the corporation to maintain special books and accounts in order to present the transactions in accordance with the regulations placed on it. Subsidiary records are necessary to supplement the special accounts and to furnish additional information which may be demanded at any time by those having internal or external control. It is the purpose of the following chapter to discuss more completely the special accounts and records which are peculiar to the corporate form.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

What is the purpose of the charter and by whom is it granted?

— 2 —

Who are the incorporators of a corporation?

— 3 —

Why should a corporation have a name?

— 4 —

Why should the incorporators designate the purpose for which the corporation is organized?

— 5 —

Why should the incorporators designate the amount of the capital stock, the number of shares, and the par value of each share?

— 6 —

Why should the incorporators be required to have available a designated amount of property before the corporation is allowed to begin business?

— 7 —

Who provides the working capital for the corporation and how do they provide it?

— 8 —

Will a charter be granted to one person? Why?

— 9 —

A. J. Sargent owns and operates the Candy Kitchen. He has assets of $35,000.00 used in the operations of this business. He wishes to incorporate the business with a capital stock of $50,000.00 and to issue 5,000 shares with par value of $10.00 per share. Four of his associates in this business agree to join with him in the application for the charter and subscribe for 250 shares each. He agrees to subscribe for the remaining 4,000 shares so that all the stock will be issued when the charter is granted. After the charter is granted, each subscriber pays cash for the stock subscribed. State the journal entries required to open the books for the corporation, debiting "assets of the Candy Kitchen" for the $35,000.00.

— 10 —

The Martin Manufacturing Company has secured a charter which authorizes it to issue $600,000.00 of capital stock divided equally between preferred and common stock. Land is accepted for $100,000.00 of the common stock and machinery for $50,000.00

of the preferred stock. The remaining stock has been sold for cash at par. State the journal entries necessary to open the books of the corporation.

— 11 —

Give one reason for the corporation having an authorized capital stock greater than the amount of capital needed at the time it is organized.

— 12 —

If all of the capital stock authorized by the charter at the time it is organized has not been sold and it is desired to show the authorized capital stock in the ledger, what accounts are necessary?

— 13 —

If a part or all of the capital stock is sold on the deferred payment plan, what accounts in the general ledger are necessary to show the transactions with these subscribers?

— 14 —

When stock in a corporation is sold on the deferred payment plan and cash is received from the subscriber in accordance with his contract, what accounts are debited and credited?

— 15 —

When authority is granted the corporation to increase its capital stock and it is desired to show the amount of this increase in the general ledger, what accounts are debited and credited? If a part of this increase is to be preferred and part common stock, what effect would this have on the entry?

— 16 —

When a part or all of this increased capital stock is sold for cash, what accounts are debited and credited?

— 17 —

State the method of procedure when a corporation buys the business of a partnership and issues stock to the partners for their interests in the business purchased.

— 18 —

"As long as the corporation acts in accord with the laws and its charter and by-laws, it is proceeding on a legitimate basis." Does this mean that a corporation organized to operate a retail clothing store could not engage in the real estate business for the purpose of buying and selling real estate? Give reasons for your answer.

— 19 —

If possible, secure a copy of the corporation laws of your state and show wherein the usual conditions differ from those required in Illinois and New York as discussed in this chapter.

LABORATORY MATERIAL

Exercise No. 169

M. E. McMahon, E. D. Carpenter, B. B. Baker, J. W. Smith and H. H. Woodward have secured a charter to form a corporation for the purpose of conducting an agency for the purchase and sale of the Oakland automobile under the firm name of The Citizens Motor Car Company. The capital stock is to consist of 500 shares of common stock, par value $50.00. Each of the incorporators has subscribed and paid cash for 100 shares.

INSTRUCTIONS: Make in journal form the opening entry for this corporation.

Exercise No. 170

A corporation known as the Concrete Manufacturing Company has been organized under the laws of the state of Ohio with a capital stock of $200,000.00: $100,000.00 preferred and $100,000.00 common stock, par value $100.00 per share. This corporation takes over the partnership business of Hanson & Davis. The corporation agrees to pay the partnership $120,000.00 for its business, consisting of machinery and equipment, $5,000.00; accounts receivable, $15,000.00; manufactured concrete ready for sale, $100,000.00. Each partner receives two hundred and fifty shares of preferred and three hundred and fifty shares of common stock at par in payment for his interest in the partnership. The remainder of the stock is subscribed and paid for in cash.

INSTRUCTIONS: Make in journal form the entries necessary to record the facts stated.

2. Post allowing four lines for each account and prove the equality of debits and credits by a Trial Balance.

Exercise No. 171

Six persons of your city, all citizens of your state, are desirous of forming a manufacturing company, to be incorporated in your state with branches maintained in adjoining states. One person will furnish a building and land worth $100,000.00. The others will furnish cash totaling $300,000.00. The stock allotted to these six incorporators is to be common, each share to be valued at $100.00 par. They plan to solicit subscriptions to bring the paid-up capital to $600,000.00 by issuing eight per cent cumulative preferred stock for the necessary amount. The total capital stock to be authorized by the certificate of incorporation is to be $750,000.00, 4,000 shares common stock and 3,500 shares preferred stock.

INSTRUCTIONS: 1. State fully and definitely the steps that these persons would have to take before they could legally carry on business. This answer may be presented in outline form, arranged chronologically.

2. State fully the details that would be included in the certificate of incorporation, supplying further data if necessary.

3. Assuming that the $600,000.00 has been fully subscribed and paid for, make the opening entries.

Exercise No. 172

C. M. Anderson, who has been conducting a retail hardware business, incorporates under the firm name of The Anderson Hardware Co., with a capital stock of $5,000.00, 100 shares, par value $50.00. A. M. Walsh, A. R. Raymer, R. E. Rockwell and M. M. Berning each subscribe for 15 shares and C. M. Anderson 40 shares. It is agreed to pay Anderson $2,000.00 for the net assets of the business as shown by the Balance Sheet given below. Anderson accepts the 40 shares of stock in payment for his business and the other subscribers pay cash for their stock.

C. M. ANDERSON

BALANCE SHEET, OCTOBER 31, 192

Assets			*Liabilities*		
Cash..................	1,593	85	Accounts Payable........	1,107	15
Accounts Receivable.....	891				
Mdse. Inv., Oct. 31......	622	30	*Proprietorship*		
			C. M. A's Capital	2,000	
Total Assets.............	3,107	15	Total Liab. and Prop.....	3,107	15

INSTRUCTIONS: 1. Make in journal form the entries to close Anderson's books.

2. Make in journal form the entries to open the books of the corporation.

Exercise No. 173

N. B. DAVIS

BALANCE SHEET, NOVEMBER 30, 192

Assets			*Liabilities*		
Cash..................	3,615	25	Notes Payable...........	1,949	95
Notes Receivable........	292	32	Accounts Payable........	4,273	19
Accounts Receivable.....	1,002	86			
Mdse. Inventory	6,172	71	Total Liabilities.........	6,223	14
Furniture and Fixtures...	140		*Proprietorship*		
			N. B. Davis, Capital.....	5,000	
Total Assets.............	11,223	14	Total Liab. and Prop.....	11,223	14

N. B. Davis, who has been conducting a retail dry goods store, incorporates under the firm name of The N. B. Davis Company, with a capital stock of $10,000.00, 200 shares, par value $50.00. The following subscriptions are received: N. B. Davis, 100 shares; H. M. Brayton, 20 shares; E. M. Ward, 15 shares; C. A. Clark, 5 shares; A. S. Walker, 10 shares; E. A. Hanson, 25 shares. It is agreed to pay Davis $5,000.00 for the net assets of his business as shown by the Balance Sheet given on page 636. Davis accepts the 100 shares of stock in payment for his business. The other subscribers pay cash for their stock.

INSTRUCTIONS: 1. Make in journal form the entries to close the books of N. B. Davis.

2. Make in journal form the entries to open the books of the corporation.

Exercise No. 174

Chas. Simonds, who has been conducting a retail book and stationery business, incorporates under the firm name of The Chas. Simonds Company, with a capital stock of $25,000.00, 250 shares, par value $100.00. The following subscriptions have been received: Chas. Simonds, 170 shares; B. Austin, 40 shares; L. E. Barton, 20 shares; Frank L. Bernard, 10 shares; and H. C. Hayes, 10 shares. Simonds pays for his stock with the net assets of his business as shown by the Balance Sheet given below. The other subscribers pay cash for their stock.

CHAS. SIMONDS

BALANCE SHEET, MARCH 31, 192

Assets			*Liabilities*		
Cash	15,538	04	Notes Payable	14,578	10
Notes Receivable	2,038	91	Accounts Payable	17,491	12
Accounts Receivable	12,912	65			
Mdse. Inventory	11,504	62	Total Liabilities	32,069	22
Furniture and Fixtures	2,075				
Land	2,000		*Proprietorship*		
Buildings	3,000		Chas Simonds, Capital	17,000	
Total Assets	49,069	22	Total Liab. and Prop.	49,069	22

INSTRUCTIONS: 1. Make in journal form the entries to close the books of Chas. Simonds.

2. Make in journal form the entries to open the books of the corporation.

Exercise No. 175

W. R. Colter and J. H. Lawson have been conducting a wholesale grocery business. They incorporate under the firm name of

The Colter Grocery Company, with a capital stock of $30,000.00, 300 shares preferred and 300 shares common stock, par value $50.00. The following subscriptions are received: J. H. Lawson, 200 shares preferred stock; W. R. Colter, 200 shares common stock; C. H. Hamer, 30 shares common stock; M. M. Boyle, 20 shares common stock. It is agreed to pay Colter & Lawson $20,000.00 for the net assets of their business as shown by the Balance Sheet below. J. H. Lawson and W. R. Colter accept the stock in payment for their interest in the business. The other subscribers pay cash for their stock.

COLTER & LAWSON

BALANCE SHEET, SEPTEMBER 30, 192

Assets			*Liabilities*		
Cash	214	85	Notes Payable	5,018	25
Notes Receivable	1,394	43	Accounts Payable	3,576	96
Accounts Receivable	9,515	89	Accrued Wages	161	24
Mdse. Inventory	4,698	95			
Office Equipment	1,294	11	Total Liabilities	8,756	45
Delivery Equipment	2,400				
Buildings	6,173	19	*Proprietorship*		
Land	3,000				
Unexpired Insurance	65	03	J. W. Lawson, Capital	10,000	
			W. R. Colter, Capital	10,000	
			Total Proprietorship	20,000	
Total Assets	28,756	45	Total Liab. and Prop.	28,756	45

INSTRUCTIONS: 1. Make the entries to close the books of Colter and Lawson.

2. Make the entries to open the books of the corporation.

Exercise No. 176

O. P. Hellar and J. C. Longman have been conducting a retail shoe business. They incorporate under the firm name of The Regal Shoe Company, with a capital stock of $10,000.00, 100 shares of stock, par value $100.00. The following subscriptions are received: O. P. Hellar, 35 shares; J. C. Longman, 35 shares; P. B. S. Peters, 10 shares; D. C. Brown, 10 shares; O. A. Haynes, 10 shares. It is agreed to pay O. P. Hellar and J. C. Longman each $3,500.00 for their net interests in the business as shown by the Balance Sheet given on page 639. Hellar and Longman each accept 35 shares of stock in payment for their interest in the business and the other subscribers pay cash for their stock.

HELLAR & LONGMAN

BALANCE SHEET, DECEMBER 31, 192

Assets			*Liabilities*		
Cash	626	05	Notes Payable	3,600	
Notes Receivable	793	87	Accounts Payable	2,602	87
Accounts Receivable	2,614	86	Accrued Wages	64	65
Mdse. Inventory	6,478	39			
Store Fixtures	688	70	Total Liabilities	6,267	52
Delivery Equipment	1,395				
Office Equipment	523	35	*Proprietorship*		
Store Supplies	37	15	O. P. Hellar, Capital	3,500	
Unexpired Insurance	110	15	J. C. Longman, Capital	3,500	
			Total Proprietorship	7,000	
Total Assets	13,267	52	Total Liab. and Prop.	13,267	52

INSTRUCTIONS: 1. Make in journal form the entries to close the books of Hellar and Longman.

2. Make in journal form the entries to open the books of the corporation.

Exercise No. 177

The capital stock of the American Mercantile Company consists of 500 shares of stock, par value $100.00, owned by the following: W. R. Carter, 100 shares; A. L. Seaton, 50 shares; Robert Bryant, 75 shares; A. R. Neill, 60 shares; A. C. Harding, 25 shares; W. L. Warnick, 50 shares; C. C. Parker, 40 shares; U. R. Smart, 50 shares; C. A. Day, 35 shares, and Wm. M. Mays, 15 shares. It is desired to discontinue the business as a corporation and the first four stockholders have decided to continue it as a partnership under the firm name of W. R. Carter & Co.

All of the stockholders agree to accept settlement for their interests in the business at $110.00 per share, the retiring stockholders to be paid cash for their stock. The balance of the surplus is to remain in the business for one year to protect the partnership from any loss which may result through the failure to collect the notes and accounts accepted from the corporation by the partnership. At the end of the year, any balance of this surplus will be paid in cash to the former stockholders in proportion to their holdings at the time of the dissolution of the corporation.

Each of the four partners invests $5,000.00 in cash in addition to his interest in the assets as shown by the number of shares he owns in the corporation.

THE AMERICAN MERCANTILE COMPANY

BALANCE SHEET, MAY 31, 192

Assets			*Liabilities*		
Cash	7,606	11	Notes Payable	10,000	
Notes Receivable	2,465	75	Accounts Payable	27,824	18
Accounts Receivable	53,075	80	Accrued Interest Cost	149	
Mdse. Inventory	25,935	28			
Branch Store Inventory	4,136	82	Total Liabilities	37,973	18
Accrued Interest Earned	32	75			
Office Equipment	2,127	99	*Proprietorship*		
Office Supplies	136	88			
Unexpired Insurance	310		Capital Stock	50,000	
			Surplus	7,854	20
			Total Proprietorship	57,854	20
Total Assets	95,827	38	Total Liab. and Prop.	95,827	38

INSTRUCTIONS: 1. Make (in journal form) the entries for (a) the investment of the four partners; (b) the transfer of the assets and liabilities of the corporation to the partnership, and (c) the transactions with the retiring stockholders.

2. Assuming that at the end of the first year of operations, there remains uncollected a note for $500.00 and an account for $604.20 and it is agreed that these are to be charged to the Surplus account, make (in journal form) the entry to adjust the balance of the Surplus account, the partners' personal accounts being credited with their share.

CHAPTER XLII

ACCOUNTS PECULIAR TO A CORPORATION

Capital Stock, Capital, and Surplus

The charter of a corporation states the maximum amount of stock which it may issue. This amount is termed the *authorized* capital stock. In some states the laws require that a certain percentage of the authorized capital stock must be issued as a minimum. Since the company is under no obligation to issue stock in excess of the minimum required by law, frequently the amount issued is not equal to the amount authorized. The stock issued is termed the *outstanding* stock, and the difference between the *authorized* and the *outstanding* stock is known as the *unissued* capital stock.

In making the ledger record, the authorized capital stock may be shown as a credit item and the unissued capital stock shown as a debit item. By subtracting the latter from the former, the outstanding stock can be obtained at any time. If desired, the authorized capital stock and the unissued capital stock may be omitted from the ledger record and only the outstanding capital stock shown. In the following discussion both methods will be illustrated. Whichever method is followed in making the ledger record, it is desirable that the three items, authorized capital stock, unissued capital stock and outstanding capital stock, be shown on the Balance Sheet. To avoid confusion it is necessary for the student to understand the meaning of these terms.

A careful distinction must be made between the *capital* and the *capital stock* of a corporation. The *capital* of a corporation is its proprietorship, or the difference between its assets and its liabilities. Since the assets and liabilities of a going business are continually changing, its capital does not remain the same. The assets and liabilities of a firm at the end of February may be quite different in value from its assets and liabilities at the end of January, and consequently the amount of its capital may be different on these two dates. Such changes in the capital of the corporation are taking place continuously. Since the amount of the capital stock of a corporation remains constant, except when the charter is amended, it is necessary to provide some means of

recording fluctuations in the proprietorship. This is accomplished by setting up a Surplus account. This account records the increases and decreases in proprietorship which take place during the operations of the business. To arrive at the capital or proprietorship of the corporation at any time, it is necessary to add the surplus to the capital stock outstanding. Sometimes the proprietorship of a business becomes less than its capital stock, in which case the difference is termed *deficit* instead of surplus, and its amount is subtracted from the Capital Stock to ascertain the capital or proprietorship.

Accounts with Capital Stock

There are two methods of keeping a ledger record with capital stock. The first method provides for a record of the capital stock authorized and of the unissued capital stock, if any. The second method provides for a record of capital stock issued and outstanding only. Both methods will be explained.

(1) *First Method.* The purpose of the Capital Stock account is to show the par value of the capital stock authorized by the charter. If different classes of stock, such as common and preferred, are authorized by the charter, a separate account is kept with each class. The debits and credits to the account kept with each class are the same.

The debits and credits to the Capital Stock account are as follows:

Capital Stock

Debit:	Credit:
With the par value of any decrease in capital stock authorized by amendment to the charter.	With the par value of the capital stock authorized by the charter. With the par value of any increase in capital stock authorized by amendment to the charter.

The balance of this account shows the par value of the capital stock authorized. If all the stock authorized has been sold and issued, the balance of this account shows the outstanding capital stock of the corporation. If any part of it has not been issued, the value of this is shown in the Unissued Capital Stock account. The difference between the balance of the Capital Stock account and the Unissued Capital Stock account is the par value of the stock outstanding. All three items are shown on the Balance Sheet in ascertaining the proprietorship of the corporation.

The purpose of the Unissued Capital Stock account is to show the par value of the unissued capital stock. When all of the stock of the corporation has been issued, this account will balance.

The debits and credits to the Unissued Capital Stock account are as follows:

Unissued Capital Stock

Debit:	Credit:
With the par value of the capital stock authorized by the charter. With the par value of any increase in capital stock authorized by amendment to the charter.	With the par value of capital stock issued. With the par value of any decrease in capital stock authorized by amendment to the charter.

The balance of this account is a debit and shows the amount of unissued capital stock. It is shown on the Balance Sheet as a deduction from the balance of the Capital Stock account.

(2) *Second Method.* The purpose of the Capital Stock account is to show the par value of the capital stock outstanding.

The debits and credits to the Capital Stock account are as follows:

Capital Stock

Debit:	Credit:
With the par value of capital stock canceled.	With the par value of capital stock issued.

The balance of this account shows the par value of the capital stock outstanding.

It makes little difference which method is used so long as the records indicate the facts clearly. In the laboratory material accompanying this text, instructions will be given as to the method to be followed.

Surplus Account

The surplus of a corporation is the difference between its proprietorship and capital stock outstanding. If the proprietorship of a corporation is less than its capital stock outstanding, the difference is termed a *deficit.* The Surplus account shows the accumulated earnings of the corporation. At the close of each fiscal period, the net earnings of the period are carried to the Surplus account. When profits are distributed to the stockholders, the amount distributed is taken from the Surplus account, and the balance of the account shows the accumulated profits retained in the business. Sometimes errors are discovered during one period which show that the profits of a preceding period have been overstated or understated. Such errors should be corrected by increasing or decreasing the amount of the surplus, because such profits or losses do not affect the earnings of the current period, hence should not be shown in the expense and income accounts of the period.

The debits and credits to the Surplus account are as follows:

SURPLUS

Debit:	Credit:
At the close of the fiscal period with the net loss shown by the debit balance of the Profit and Loss account. With the amount of dividends declared. With any adjustment during the fiscal period which diminishes the profit of a preceding period.	At the close of the fiscal period with the net profit shown by the credit balance of the Profit and Loss account. With any adjustment during the fiscal period which increases the profit of a preceding period.

The balance of the Surplus account at the close of the fiscal period shows the undivided profits of the corporation. It is shown on the Balance Sheet as an addition to the Capital Stock Outstanding.

Method of Showing the Proprietorship of the Corporation

In showing the proprietorship of a corporation on the Balance Sheet, it is necessary to take into consideration at least three items: capital stock authorized, unissued capital stock, and surplus. The relation of these items to proprietorship is indicated by the following equations:

Assets – Liabilities = Capital or Proprietorship.

Capital = Capital Stock Outstanding + Surplus.

Capital Stock Outstanding = Capital Stock Authorized – Stock Unissued.

The following condensed Balance Sheet illustrates the application of these equations:

WESTERN FURNACE COMPANY

BALANCE SHEET, JULY 31, 192

Assets			*Liabilities*		
Assets (total)..........		79,462 50	Liabilities (total)......		28,011
			Proprietorship		
			Cap. Stock Authorized	50,000	
			Unissued Stock........	10,000	
			Cap. Stock Outstanding	40,000	
			Surplus...............	11,451 50	
			Total Proprietorship.		51,451 50
Total Assets		79,462 50	Total Liab. and Prop...		79,462 50

Dividend Account

A dividend is a distribution of profits to stockholders. Dividends can be legally declared only out of profits. They can be declared only by the directors, and a stockholder has no claim upon the profits of the corporation until a dividend has been declared.

Dividends may be declared from the accumulated profits of previous periods, or they may be declared at the end of the fiscal period from the profits of the current period. When dividends are declared from current profits, there are two methods by which they may be recorded. By the first method, the dividends are deducted from the net earnings shown in the Profit and Loss account, leaving only the earnings in excess of the dividend to be carried to the Surplus account. By the second method, the total net earnings as shown by the Profit and Loss account, are transferred to the Surplus account and the dividend is deducted from the Surplus account. In both cases a Dividend account is credited for the amount of the dividends. To illustrate the two methods, it may be assumed that the Profit and Loss account shows a balance of $25,467.85 before any distribution of profits is made. The board of directors declares a dividend of $15,000.00. Under the first method, the entries would be:

JANUARY 10, 192

Profit and Loss	15,000			
Dividend No. 1			15,000	
To record the declaration of Dividend No. 1				
10				
Profit and Loss	10,467	85		
Surplus			10,467	85
To transfer profits in excess of dividend to Surplus.				

The ledger accounts necessary to record these transactions would be as follows:

PROFIT AND LOSS

192						192					
Jan.	10	Div.No.1	J9	15,000		Dec.	31	Net Profit	√	25,467	85
	10	Surplus	J9	10,467	85						
				25,467	85					25,467	85

SURPLUS

						192					
						Jan.	10	P. & L.	J9	10,467	85

DIVIDEND NO. 1

						192					
						Jan.	10	P. & L.	J9	15,000	

With the second method, the entries would be:

DECEMBER 31, 192

Profit and Loss	25,467	85		
Surplus			25,467	85
To transfer profits to Surplus.				

JANUARY 10, 192

Surplus	15,000			
Dividend No. 1			15,000	
To show declaration of Dividend No. 1.				

The ledger accounts resulting from these entries would be:

PROFIT AND LOSS

192 Dec.	31	Surplus	J9	25,467	85		192 Dec.	31	NetProfit	√	25,467	85

SURPLUS

192 Jan.	10	Div.No.1	J9	15,000		192 Dec.	31	NetProfit	J9	25,467	85

DIVIDEND NO. 1

					192 Jan.	10	Surplus	J9	15,000	

Since dividends are not usually declared until some time after the close of the fiscal period, the second method is the one most frequently followed, and this method will be assumed in the following discussion.

The purpose of the Dividend account is to show the amount of dividends declared, but unpaid. When a dividend is declared by the board of directors, it becomes a liability of the company to the stockholders and must be so recorded at once. Usually a separate Dividend account is opened with each dividend declared. These accounts are numbered serially. Thus there will appear on the ledger Dividend No. 1, Dividend No. 2, etc.

The Dividend account is debited and credited as follows:

DIVIDEND NO. —

Debit:	Credit:
With the amount of dividends paid.	With the amount of dividends declared by the board of directors.

The balance of the Dividend account shows the amount of dividends declared, but unpaid. It is shown as a current liability on the Balance Sheet. Usually the unpaid dividends are termed

Dividends Payable when they appear on the Balance Sheet. If dividends are not paid when due, a stockholder may bring legal action against the company in the same manner as against any other creditor.

The policies of corporations, with reference to the amount of their profits which they distribute as dividends, vary widely. Conservatively managed corporations prefer to retain all earnings above reasonable dividends as a fund available in case of depression or to take care of unforeseen contingencies. The funds derived from accumulated earnings are usually used in expanding the business or in building up a larger working capital.

Treasury Stock Account

Treasury stock is stock which has been issued at par or at a premium, fully paid for, but through purchase or gift is reacquired by the company. Such stock is entirely different from unissued stock, since the latter has never been issued by the corporation, and does not represent any recordable value. Treasury stock, on the other hand, must appear in the records, for until it is canceled it represents a part of the capital of the corporation.

Fully paid up stock is sometimes donated to the company in order that it may be sold to secure working capital. This practice is especially prevalent in those companies which issue all their stock in payment for property. The following will illustrate the method of handling donated stock: The stockholders of a company donate $50,000.00 (par value) of stock to the corporation. The entry to record the receipt of the stock is:

March 15, 192

Treasury Stock	50,000	
Treasury Stock Donated		50,000
To record capital stock donated to the company by stockholders.		

If the stock is sold at par, the following entry would be made:

April 10, 192

Cash	50,000	
Treasury Stock		50,000
To record sale of treasury stock at par.		

The Treasury Stock Donated account will show a balance of $50,000.00, which is the profit derived from the sale of the treasury stock. This profit may be closed into the Surplus account, but it is better to close it into a Capital Surplus account to indicate that it is not available for dividends. It should not be distributed as dividends, for the stockholders donated the stock to provide working capital, and their object would be defeated if the proceeds of the sale were distributed as dividends.

In many cases where stock is donated to the company, it can not be sold at par. Assuming in the present case that the stock is sold at $80.00 a share, the entries would be as follows:

April 10, 192

	Cash	40,000	
	Treasury Stock Donated	10,000	
	Treasury Stock		50,000
	To record sale of treasury stock at $80.00 a share.		

The Treasury Stock account would thus balance, and the Treasury Stock Donated account would show a balance of $40,000.00, which is the profit derived from the gift.

Sometimes a corporation purchases its stock. In this case, the Treasury Stock account is debited for the par value of the stock when purchased and credited for its par value when sold or canceled. Any difference between the par value of the stock and its purchase price is debited to an account with Premium on Treasury Stock Purchased or credited to an account with Discount on Treasury Stock Purchased. Until the stock is sold or canceled, these accounts remain on the books and appear on the Balance Sheet as a deduction from or an addition to Surplus.

When sold, the par value of the stock is credited to the Treasury Stock account, and any difference between par and the sale price is debited to Discount on Treasury Stock Sold or credited to Premium on Treasury Stock Sold. At the time of sale, all discount or premium applicable to the stock, recorded when it was purchased and when it was sold, is transferred from the discount and premium accounts to the Surplus, or Capital Surplus, account.

The purpose of the Treasury Stock account is to show the par value of the stock of the corporation which has been donated to it or purchased by it. It must *never* represent unissued stock.

The debits and credits to the Treasury Stock account are:

Treasury Stock

Debit:	Credit:
With the par value of the stock of the corporation purchased by the corporation. With the par value of the corporation's stock donated to the corporation.	With the par value of treasury stock sold.

The balance of the Treasury Stock account shows the par value of the stock of the corporation which it holds in its treasury. It is shown on the Balance Sheet as a deduction from the balance of the Capital Stock account.

Accounts with Subscriptions Receivable and Capital Stock Subscribed

If any time is to elapse between the subscriptions for stock and the time when the subscriptions are due and payable, it is advisable to open accounts to show the amount due from subscribers and the amount of stock which the company has agreed to issue. The former account is termed Subscriptions Receivable and the latter is termed Capital Stock Subscribed.

The debits and credits to the Subscriptions Receivable account are as follows:

SUBSCRIPTIONS RECEIVABLE

Debit:	Credit:
With the par value of capital stock subscribed.	With the subscriptions paid.

The balance of this account is the amount due from subscribers. It is usually shown on the Balance Sheet as a current asset. In the case of stock sold on the installment plan, payments may extend over a period of years. In this case, it is not a current asset, but is shown on the Balance Sheet under a separate subtitle after all the other assets or in the proprietorship section as a deduction from Capital Stock Subscribed, discussed below.

The debits and credits to the Capital Stock Subscribed account are as follows:

CAPITAL STOCK SUBSCRIBED

Debit:	Credit:
With the par value of shares issued to subscribers. At the same time Capital Stock or Unissued Capital Stock will be credited, depending on the method employed in recording the capital stock.	With the par value of the capital stock subscribed.

The balance of this account shows the capital stock subscribed for but not issued. It is shown on the Balance Sheet as an addition to Capital Stock Outstanding, if any has been issued; if not, it is shown as the only item of proprietorship. If Subscriptions Receivable are deducted from Capital Stock Subscribed on the Balance Sheet, the difference is termed *paid-in subscriptions* and added to Capital Stock Outstanding.

In the case of many corporations where the capital stock is paid for shortly after it is subscribed, the accounts with Subscriptions Receivable and Capital Stock Subscribed are not used.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

A certain corporation has an authorized capital stock of \$500,000.00 and has \$350,000.00 capital stock outstanding. Account for the difference in the amounts of these two items.

— 2 —

(a) Can the proprietorship of the corporation be determined from the information given in Question 1? If not, what does represent the proprietorship? (b) How is the proprietorship shown on the books of the corporation?

— 3 —

Explain and illustrate two methods which may be employed in recording the capital stock of a corporation.

— 4 —

A corporation has a capital stock of \$75,000.00, all of which was issued at the time of organization. (a) State the journal entries necessary to record an increase of \$25,000.00 in capital stock which has been authorized by amendment to the charter, but which has not been subscribed. (b) How would this authorized increase of capital stock be shown on the Balance Sheet?

— 5 —

If the newly authorized stock of the corporation discussed in Question 4 had been issued and fully paid up before the close of the fiscal period, how would the Balance Sheet differ from the one prepared in accordance with Question 4?

— 6 —

A corporation has a capitalization of \$225,000.00 of which \$200,000.00 has been issued. Assume that the company has secured a revision of the charter decreasing the capital stock \$25,000.00. State the proper entries to place this transaction on the books.

— 7 —

The Blank Manufacturing Company has a total capital stock outstanding of \$200,000.00, \$100,000.00 of which is common stock and the remainder is seven per cent nonparticipating preferred. The net earnings for the year are \$24,000.00. (a) After paying the seven per cent dividend to the preferred stockholders, what rate of dividend might be allowed the common stockholders if the by-laws of the corporation require one-fourth of the net earnings of each year to be carried to surplus?

(b) Give the journal entries necessary to record the dividends on stock and the transfer of profit to the Surplus account.

(c) If the dividends so declared were paid in cash, what entries would be made?

— 8 —

Using the Balance Sheet of a corporation which publishes its financial condition in your city newspaper, apply the equations with reference to proprietorship given in this chapter.

— 9 —

Explain the two methods of recording dividends and state when one may be preferable to the other.

— 10 —

"It is customary to open a new Dividend account for each dividend declared." Explain why this should be done.

— 11 —

The stockholders of a corporation have received stock in exchange for land and buildings. As a result, the company has fixed assets but needs working capital. The stockholders agree to donate to the company $20,000.00 stock to be sold to provide working capital. What entries would be made at the time the stock is received?

— 12 —

(a) Assume that $100,000.00 treasury stock is sold at par. What entries are necessary to place this transaction on the books? (b) If the stock is sold below par, how will the accounts be affected?

— 13 —

Explain the use of the Subscriptions Receivable and the Capital Stock Subscribed accounts.

LABORATORY MATERIAL

Exercise No. 178

The Landis Manufacturing Company is incorporated with an authorized capital stock of $1,000,000.00, of which $600,000.00 is common and $400,000.00 is six per cent cumulative preferred. The company begins operations January 1, 1925, and its records are opened as of this date. Prior to January 1, 1925, $400,000.00 of common and $300,000.00 of preferred stock was subscribed and half paid for.

INSTRUCTIONS: 1. Make (in journal form) entries to record the foregoing transactions. The total authorized stock is to be recorded.

2. Post the foregoing entries, allowing eight lines for each account.

Exercise No. 179

The subscribers to the capital stock of the Landis Manufacturing Company pay the remainder of their subscriptions on July 1, 1925. The net profit for the year 1925 is $40,000.00.

Dividends on preferred stock are declared at a meeting of the board of directors on January 10, 1926. They are paid ten days later. The net profit for the year 1926 is $60,000.00.

Dividends on preferred stock are declared by the board of directors on January 12, 1927. They are paid on February 1.

INSTRUCTIONS: 1. Make (in journal form) entries necessary to record the foregoing operations. In recording the net profits for each year, debit "Assets" and credit "Profit and Loss." The student will understand that the net profit shown in the Profit and Loss account is the result of the closing of the expense and income accounts into this account, and that this profit must be represented by an increase in net assets. The Profit and Loss account will be closed into the Surplus account.

2. Post these entries to the accounts prepared in Exercise No. 178.

3. Show how the dividends declared on January 12, 1927, would appear on a Balance Sheet prepared January 31, 1927.

Exercise No. 180

At the meeting of the board of directors on January 12, 1927, it is voted to issue the remainder of the common stock. The stock is subscribed and paid in cash on February 15.

The company plans to experiment with certain new processes of manufacture, and the common stockholders agree to donate to the company ten per cent of their holdings, to be resold to the public, and the proceeds used for development purposes.

The stock is received by the company on March 1, 1927. One-half of it is sold April 1, 1927, for cash at $98.00 per share.

INSTRUCTIONS: 1. Make journal entries to record these transactions.

2. Post the journal entries to the ledger accounts prepared in Exercises Nos. 178 and 179.

CHAPTER XLIII

RECORDS PECULIAR TO A CORPORATION

Records Required by a Corporation

The financial records of a corporation are essentially the same as those of any other type of business organization. The few additional accounts required can be added in the general ledger. The books of original entry need not be different from those used by a sole proprietorship or a partnership. The only distinctive books and records required by a corporation are those used to record the corporate activities of the company. The records required for this purpose are:

(1) The Minute Book.
(2) The Subscription Book.
(3) The Subscribers' Ledger.
(4) The Stock Certificate Book.
(5) The Stockholders' Ledger.
(6) The Stock Transfer Book.

The Minute Book

The minute book is the legal record of the proceedings of all meetings of stockholders and board of directors. This book may vary in size and style from an inexpensive record book to an elaborately bound volume especially designed for the company. For convenience in making records on the typewriter, it may be loose leaf. If this be the case, the number of each page is watermarked, or each page is initialed or signed by the president and secretary to prevent insertions and substitutions.

Unless the charter and by-laws be bound in a separate volume, they should be written, pasted or bound in the minute book, usually at the front of the book. The original copy of the charter should appear in the minute book. A few pages may be left blank after each document to take care of amendments which may be made later.

All entries in the minute book are made by the secretary of the corporation. The first record should be that of the first meeting of the stockholders. Following this in chronological order, there should appear all records of meetings, regular and special, of the stockholders and board of directors, unless the

secretary should prefer to apportion a separate part of the book to record the minutes of the meetings of the stockholders and the meetings of the board of directors. In a large corporation the meetings of the stockholders and the board of directors may be recorded in separate volumes. The account of each meeting should begin at the top of a new page, and no blank pages should be left between records.

The minutes of stockholders' meetings should include date and place of meeting, copy of the notice given, name of the presiding officer, amount of stock represented by those in attendance, and whether or not the attendance constitutes a quorum, etc. A very complete, detailed record of the transactions of each meeting should be given, as this serves as authority for actions of the officers and furnishes data for many important entries to be made by the accountant.

Whether or not the exact wording of each motion or resolution should be recorded depends upon the importance of the matter under consideration. If so ordered by the meeting, any report or other document presented before the meeting may be "spread upon the minutes," i. e., written out in full. In any case, all such papers should be preserved by the secretary.

Regular meetings of stockholders are annual, as a rule; meetings of the board of directors may be monthly or quarterly. Special meetings of either body may be called as prescribed by the by-laws. As the legality of the proceedings of a special meeting depends upon the legality of the call and notice, the call and notice are usually entered upon the minutes.

As a basis for the transaction of business, reports may be given by the president on general conditions, by the treasurer on financial conditions, by the regular committees or by such special committees as may have been appointed at preceding meetings. Transactions may include decisions on the purchase and sale of property, investment of surplus funds, declaration of dividends, securing additional funds through issue of bonds or additional stock, creation and continuation of reserves, sinking funds, etc.

The Subscription Book

In most states, laws governing the incorporation of corporations provide that all or a major part of the capital stock of a corporation must be subscribed before a charter will be granted. It is necessary, therefore, for the organizers of a corporation to secure subscriptions to the stock before they apply for a charter. Usually, "subscription blanks" are prepared on which to secure the signatures of those who agree to subscribe to the stock. Each blank is headed with a contract by which the subscribers agree to purchase the number of shares set opposite their signatures. Any number of subscribers may sign the same subscription list.

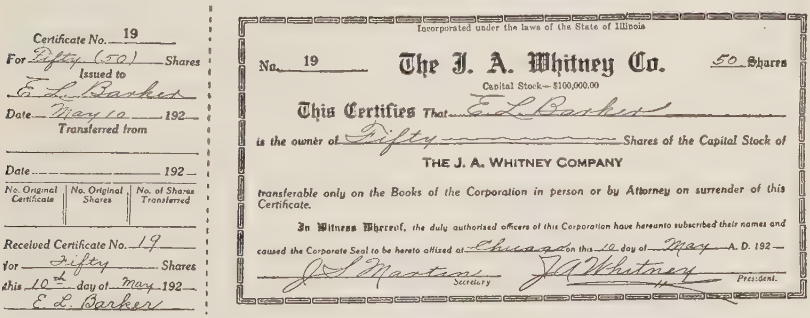
In a large corporation there may be several such lists, since one will be needed for each solicitor. Later these subscription lists are filed in a binder and referred to as the subscription record or book. The entries for subscriptions are made in the other records of the corporation from the subscription book.

The Subscriber's Ledger

This ledger contains accounts with the subscribers to the capital stock, each subscriber being charged with the par value of the stock subscribed and credited with the payments in full or on account. The original entries in this ledger are made from the subscription book and the payments are posted from the cash record. The Subscriptions Receivable account in the general ledger is the controlling account for the subscribers' ledger. No particular form of ruling is required for the subscribers' ledger, as the standard ledger ruling will serve satisfactorily.

Stock Certificate Book

The stock certificate book consists of blank stock certificates numbered serially, bound in book form, usually 100 to 500 in a book, with a stub for each certificate. If both common and preferred stock are issued, different kinds of certificates are usually used for each class, although some companies use one form for both common and preferred and designate the preferred stock certificate by printing the word "Preferred" and the conditions of preference in a different color ink across the face of the common stock certificate. In some cases the provisions of the charter with reference to the different classes of stock are printed in the certificate. In this case the same form can be used for all classes and it is only necessary to indicate the class of stock for which the certificate is issued. When different forms are used, separate books may be kept for each class, or both may be bound in the same book; in either case, each class should have its own serial numbers. It is preferable to have separate certificates for each class of stock.



Certificate No. 19
For Fifty (50) Shares
Issued to
E. L. Barker
Date May 10 192
Transferred from

Date 192

No. Original Certificate	No. Original Shares	No. of Shares Transferred

Received Certificate No. 19
for Fifty Shares
this 10th day of May 192
E. L. Barker

Incorporated under the laws of the State of Illinois

No. 19 **The J. A. Whitney Co.** 50 Shares

Capital Stock—$100,000.00

This Certifies That E. L. Barker

is the owner of Fifty Shares of the Capital Stock of

THE J. A. WHITNEY COMPANY

transferable only on the Books of the Corporation in person or by Attorney on surrender of this Certificate.

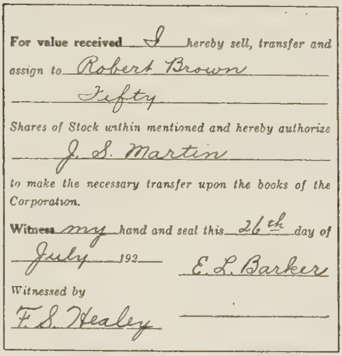
In Witness Whereof, the duly authorized officers of this Corporation have hereunto subscribed their names and caused the Corporate Seal to be hereto affixed at Chicago on this 10 day of May A. D. 192

J. L. Martin — Secretary
J. A. Whitney — President.

Illustration No. 97, Stock Certificate Book

As will be seen, by referring to Illustration No. 97, on page 655, each certificate contains the corporate name, the state in which it is located, the amount of the capital stock, the total number of shares and the number of shares represented by the certificate. When stock is issued, the certificates and accompanying stubs are properly filled out. The stubs serve as a permanent record of the number of shares of stock represented by each certificate, the date of issue, the name of the person to whom issued and whether the stock is an original issue or a reissue. On the stub there may be a receipt which the stock owner or his attorney signs when the certificate is surrendered for cancelation. This is not done in large corporations where stock is sold extensively.

When stock is transferred, the owner must sign the endorsement printed on the back of the certificate. The form of this endorsement is shown in Illustration No. 97a.



For value received I hereby sell, transfer and assign to Robert Brown

Fifty

Shares of Stock within mentioned and hereby authorize

J. S. Martin

to make the necessary transfer upon the books of the Corporation.

Witness my hand and seal this 26th day of July 192— E. L. Barker

Witnessed by

F. S. Healey

Illustration No. 97a, Endorsement

The signature of the transferor must be witnessed, as the form at the left indicates, but the name of the new owner need not be filled in. If this part of the endorsement is left blank, the certificate may be passed from one purchaser to another. However, on the records of the company (the stub of the certificate and the account in the stock ledger), the first transferor is still owner, and he remains so until this certificate is surrendered to the secretary of the company and another one is issued to the new owner. The new owner's name must now be inserted in the endorsement of the old certificate. When a certificate is canceled, it is pasted to the stub from which it was detached when issued. Attention has already been called to the fact that if a stock certificate is lost or destroyed, an indemnity bond is usually required before the secretary will issue a new certificate.

From this discussion, it is seen that the stock certificate book is a record book, not a book of account. However, a relation exists between the results shown by this book and the Capital Stock account or accounts in the general ledger, and careful check should be made regularly to see that the stock certificate book is being kept accurately. From the data given on the stubs of this book, the bookkeeper secures data for entries in the stockholders' ledger, with which the stock certificate book must also check as is shown by the following discussion.

Stockholders' Ledger

The *stockholders' ledger,* or stock book as it is sometimes called, is a subsidiary record of the capital stock outstanding, showing a separate account for each stockholder and controlled by the account or accounts in the general ledger that show the amount of capital stock outstanding.

An account is opened with each stockholder and credited with the number of shares of stock purchased by him. Conversely, the stockholder is debited with the number of shares he sells or transfers. It is important to bear in mind that ownership or proprietorship of each stockholder is indicated not by the par value or any other value of the shares held, but by the number of shares held, the value of which may be estimated quite readily, if desired.

The following example illustrates the recording of individual stock ownership in the stockholders' ledger: A, B and C are the incorporators of the King Mfg. Co., which has a capital stock of $100,000.00, each share having a par value of $100.00. A owns 500 shares, B owns 300 shares, and C owns 200 shares. In the general ledger the Capital Stock account would show a credit balance of $100,000.00, or the total amount of capital stock outstanding. To maintain a record of the individual subscribers to the capital stock, three accounts would be opened in the stockholders' ledger, one for A, one for B, and one for C. A credit of 500 shares would be placed to A's account, 300 shares to B's account, and 200 shares to C's account. The total of the balances of these three accounts, 1,000 shares, is thus equal to the credit balance of the Capital Stock account: 1,000 shares at $100.00 each equals $100,000.00.

The information is recorded in the stockholders' ledger from the certificates of stock issued to A, B and C. As long as these individuals hold the same amount of stock as when the business was incorporated, there will be no change in the accounts in the stockholders' ledger. If at a later date some of the stock is transferred from one of the shareholders to another, a change will have to be made in the accounts in the stockholders' ledger. For example, A sells B and C each 100 shares. This transaction involves first, cancellation of A's ownership of these 200 shares and reissuing certificates to the new holders to complete the transfer. If A's holdings are in 100 share lots, it is necessary for him to have one certificate of 100 shares canceled to take care of B's new ownership, and another certificate, also of 100 shares, canceled in favor of C. These canceled certificates, signed by A, are pasted to the original stubs and new certificates issued to B and C. Following this, it is necessary to enter the transactions in the stockholders' ledger, the information for these entries being obtained from the stubs of the canceled certificates and the new

certificates issued. A's account is debited for the 200 shares transferred and B's and C's accounts each credited for the purchase of 100 shares. When the posting is completed, the total credits still amount to 1,000 shares, or the amount of capital stock outstanding. This example illustrates that in a corporation, while ownership of stock is constantly shifting, the amount of capital stock remains the same.

The above transactions, when posted to the stock ledger, appear in the accounts as follows:

A

192				192			
Feb.	1	To B	100 shares	Jan.	1	Original Issue	500 shares
	1	To C	100 shares				
	1	Balance	300 shares				
			500 shares				500 shares
				Feb.	1	Balance	300 shares

B

				192			
				Jan.	1	Original Issue	300 shares
				Feb.	1	From A	100 shares

C

				192			
				Jan.	1	Original Issue	200 shares
				Feb.	1	From A	100 shares

These individual accounts for each stockholder may be compared with the accounts of the proprietors in a partnership, except that values are shown in terms of shares, not in the amount of capital stock owned. There is this difference that, in maintaining records for the corporation, the capital stock is considered apart from the ownership of stock by various individuals, hence two sets of accounts are kept, the controlling account in the general ledger, which shows the outstanding capital stock in total, and the subsidiary accounts in the stockholders' ledger, which indicate the amount of stock owned by the shareholders in the corporation. On the other hand, in a partnership, the capital accounts of the proprietors show ownership in the business.

In order that the subsidiary accounts will check with the controlling ledger, it is necessary that accurate records be maintained in the stockholders' ledger corresponding to the information kept in the stock certificate book. This requires that the number of shares represented by each certificate not canceled in the stock certificate book be listed in the stockholders' ledger.

The total of these shares should equal the total credit balances of the accounts in the stockholders' ledger.

Some companies use the simple ruling of the ordinary ledger in the stockholders' ledger. This is satisfactory if few transfers are made, but in large companies, where stock is constantly changing hands, a more complete record is necessary. Furthermore, since a stockholder may "split" a certificate, or sell only a part of the shares represented therein, the number of shares sold will not always correspond exactly with the certificate. To record all these details, additional columns will be needed in the stockholders' ledger, necessitating the use of a wider ledger page or card.

Let us assume that in the illustration previously cited, A's entire holdings are represented by one certificate of 500 shares, hence when he sells 100 shares each to B and C, he is splitting his certificate. This will necessitate the surrendering of A's certificate (No. 1) to the company. To show A's remaining interest in the corporation, a new certificate (No. 4) representing 300 shares is issued to him. Certificates of 100 shares each (Nos. 5 and 6) are issued to B and C to show their additional interests in the corporation. To record these details a form similar to Illustration No. 98 might be used:

A

Date of Transfer	To Whom Transferred	No. of Certificate Canceled	No. of Certificate Reissued	No. of Shares Transferred	Date of Issue or Transfer	From Whom Transferred	No. of Certificate Issued	No. of Shares Secured
192					192			
Feb. 1	B	1	5	100	Jan. 1	Original Issue	1	500
1	C	1	6	100				
1	Balance		4	300				
				500				500
					Feb. 1	Balance	4	300

Illustration No. 98, Stockholders' Ledger

Another form that is widely used to show the ownership of stock differs from the preceding form in that the balance of the account is extended after each transaction. This form is shown in Illustration No. 99.

The two forms explained and illustrated are those usually adopted by corporations. The exceptions are found in states whose statutes require the stockholders' ledgers to conform to the style established by law. From the accountant's viewpoint, any form is satisfactory which gives all the essential facts.

Whatever importance is placed on the form of the stockholders' ledger arises from the fact that the stockholders' ledger is legal

evidence of the ownership of the stock. It is the evidence of the number of votes to which each stockholder is entitled. A stock certificate may be lost or destroyed, but the account still remains as proof of the stockholders' right to participate in the affairs of the corporation.

F. C. MADDEN, 1068 LOCUST ST., MEMPHIS, TENN.

Date of Issue		No. of Cer- tificate	From Whom Obtained or To Whom Transferred	No. of New Certificate	Date of Assignment		Debit for Shares Transferred	Credit for Shares Obtained	Credit Balance
192									
Jan.	2	..	Original Issue......	1	.....	..	...	500	500
Jan.	18	1	To C. L. Whiting...	54	Jan.	18	100	...	400
Mar.	1	8	From M. C. Watson	70	Feb.	1	...	50	450
July	20	70	To H. B. Miller....	...	July	20	50	...	400
July	20	54	To H. B. Miller....	102	July	20	100	...	300

Illustration No. 99, Stockholders' Ledger with Balance Column

Stock Transfer Book

In several states it is required that a corporation maintain a stock transfer book in which is recorded all the information with reference to transfers of shares. The law of the state of New York requires that a transfer record be kept which will show the following information:

1. The date of making each transfer of stock.
2. The name of the stock and the number of shares thereof.
3. The serial number of each surrendered certificate.
4. The serial number of the certificate issued in exchange therefor.
5. The number of shares represented by said certificate.
6. The name of the party to whom said certificate was issued.
7. The number and face value of the stamps affixed as required by the statute.

This information can be shown in a stock transfer book ruled in Illustration No. 100.

NAME OF COMPANY

Date	Serial No. of Cancelled Certificate	No. of Shares	By Whom Surrendered	To Whom Issued	Serial No. of New Certificate	No. of Shares	No. and Face Value of Stamps				
							2c	4c	$1	Etc.	Val.
192											
Oct. 1	4538	100	R. Doe	L. Man	8131	100					
Nov. 2	1312	20	E. Carr	B. Reno	8267	20					

Illustration No. 100, Stock Transfer Book

QUESTIONS FOR CLASS DISCUSSION

— 1 —

You own a building which the Ray Corporation wishes to lease for a number of years. Would you insist upon the officers having specific authority to execute the lease for the corporation? Give reasons for your answer.

— 2 —

(a) In what book would the authority to perform this specific contract be recorded? (b) How would the contract be made binding upon the corporation?

— 3 —

If you owned one share of stock in a corporation, what evidence would you have of this ownership?

— 4 —

If the board of directors fixes the salaries of the officers, in what book will the secretary record the facts regarding these salaries? How will this be made binding on the corporation?

— 5 —

If an officer should withdraw funds in excess of his salary as authorized by the board of directors, would he be responsible to the corporation for this excess drawing? Explain.

— 6 —

If the president wishes to increase the salary of the treasurer, how would he proceed?

— 7 —

If you were organizing a corporation and asking friends to subscribe for stock, would you want their subscriptions in writing and signed by the subscribers? Why?

— 8 —

What information would you desire in connection with these subscriptions?

— 9 —

A subscriber refuses to pay his subscription, contending that he is not under contract to do so. Is his contention correct? Why?

— 10 —

The following transactions relating to stock of the Independent Distributors Corporation were performed by John A. Stewart:

(1) March 11, subscribed for two shares of common stock at $100.00 a share, par value. Terms, installments of $50.00 each, payable April 15, May 15, June 15, and July 15.

(2) Paid the four installments on their due dates.

(3) July 15, received Certificate No. 239 for two shares of common stock.

(4) October 4, sold C. B. Hardy one share of this stock for $100.00 cash.

(5) January 15, the board of directors of the Independent Distributors Corporation declared a cash dividend of 6% on common stock, payable March 10.

(a) What books of the corporation would each of these transactions affect? (b) Explain the method of entering these transactions in the corporate records.

— 11 —

If you owned ten shares of stock in a corporation, would you have ten certificates each for one share, or one certificate for ten shares?

— 12 —

You purchase a share of stock in the Baird Corporation from Frank B. King, another stockholder. Would you notify the corporation of this purchase? Why?

— 13 —

What authority would the officers of the corporation have for making this transfer?

— 14 —

How does the officer of the corporation know that the signature of Frank B. King authorizing the transfer of one share of stock to you is correct?

— 15 —

What disposition is made of a canceled certificate of stock? State two reasons for this disposition of the certificate.

— 16 —

What is the purpose of (a) the subscribers' ledger, and (b) the stockholders' ledger?

— 17 —

The Capital Stock account shows that 10,000 shares of stock are outstanding. Explain how you would prove the correctness of this amount.

— 18 —

When a corporation buys its own stock from a stockholder to whom it has been issued, the Treasury Stock account is debited. The corporation will receive the certificate from the stockholder and file the certificate in the manner you described in answering Question 15. What evidence does the corporation have of this asset other than the record in the Treasury Stock account?

— 19 —

What is the difference between treasury stock and unissued stock? What effect does each have on the proprietorship of the corporation?

LABORATORY MATERIAL

Exercise No. 181

W. L. Jacobs is president and R. D. Browning, secretary of the Signal Radio Corporation. At a meeting of the Board of Directors on January 5, the following business was transacted:

1. C. A. Church was authorized to investigate the price asked by a competitor for his patent, with authority to take a sixty-day option for purchase at a price not to exceed $10,000.00. $500.00 was appropriated for the expense of this investigation.

2. A. L. Davis, attorney, was authorized to secure a lease on the building at 1742 North Main Street for a period of ten years at an annual rental of $6,000.00. W. L. Jacobs was authorized to sign for the corporation.

3. A quarterly dividend of 2% on the common stock was declared and ordered paid within 30 days.

INSTRUCTIONS: Prepare the minute book record of the foregoing proceedings. You may assume that there are ten members of the Board of Directors and a sufficient number was present to constitute a quorum, and that the president was present and chairman of the meeting. If you know some one who is secretary of a corporation, consult him for details of the openings and closings of a meeting of a Board of Directors.

Exercise No. 182

June 15, twelve persons subscribed for the following stock of The Gift Shop, a corporation just organized: M. D. Anstead, 100 shares; E. V. Fagaly, 50 shares; C. A. Gulden, 25 shares; L. D. Stallman, 25 shares; C. E. Evers, 20 shares; G. M. Van Horn, 20 shares; C. K. Ernst, 20 shares; M. M. Berning, 20 shares; R. M. Fisher, 15 shares; E. A. Grant, 15 shares; I. M. Wihler, 10 shares; P. M. Davis, 5 shares. The authorized capital stock is $50,000.00 divided into 500 shares, par value $100.00 each. The first four subscribers paid cash and their stock has been issued. The next four paid one-half cash and agreed to pay the other half in 30 days. The next four paid one-fourth cash and agreed to pay the remainder in 30, 60, and 90 days.

INSTRUCTIONS: 1. Prepare the subscription list using local addresses.

2. Make in journal form the entries necessary to record the authorized stock and the subscriptions.

3. Give information that would be contained on each of the four stubs from which the four certificates were issued.

4. Post the opening entries, allowing eleven lines for each account.

5. Open accounts in the proper ledger for the stock issued and sold on the installment plan. Allow four lines for each account; use regular ledger paper.

6. Prepare a Trial Balance from the ledger and a schedule from the subscribers' ledger showing that the balances in it correspond with the balance of the controlling account.

Retain your solution to this exercise for use in the next exercise.

Exercise No. 183

The Gift Shop completed the following transactions:

July 1, received check from G. C. Powers for $500.00 in payment for 5 shares of stock at par.

July 15, received checks to apply on purchase of stock subscribed for June 15 as follows: C. E. Evers, $1,000.00; G. M. Van Horn, $1,000.00; C. K. Ernst, $1,000.00; M. M. Berning, $1,000.00; R. M. Fisher, $375.00; E. A. Grant, $375.00; I. M. Wihler, $250.00; P. M. Davis, $125.00.

August 3, received check from L. D. Stallman for $500.00 to pay for one-half the par value of 10 shares of stock for which he subscribed today at par to be paid for within 60 days.

August 15, received checks from R. M. Fisher, $375.00; E. A. Grant, $375.00; I. M. Wihler, $250.00; and P. M. Davis, $125.00 in part payment for stock subscribed on June 15 as per contract.

September 11, received check for $500.00 from A. L. Dosett in payment for 5 shares of stock purchased today, and check from C. C. Crawford for $750.00 in payment for one-half the par value of 15 shares of stock for which he subscribed today. The balance is to be paid within 60 days.

September 15, received checks from R. M. Fisher, $375.00; E. A. Grant, $375.00; and I. M. Wihler, $250.00.

INSTRUCTIONS: 1. Make entries in journal form to record the foregoing transactions.

2. Post to the general ledger accounts used in the preceding exercise.

3. Make the required entries in the two subsidiary ledgers using the same accounts as in the preceding exercise, opening new accounts when necessary.

4. Take a Trial Balance from the general ledger accounts.

5. Prepare schedules from the subscribers' and stockholders' ledgers and prove each with the controlling account in the general ledger.

Exercise No. 184

The First National Bank is transfer agent for the Union Gas Company. October 17 the following transfers of stock were made: Certificate No. 1765 for 5 shares was transferred by C. C. Duggan to W. O. Crosswhite and certificate No. 9981 was issued; certificate No. 2742 for 12 shares was transferred by A. J. Martin to C. C. Moore and certificate No. 9982 was issued; certificate No. 1527 for 25 shares was transferred by B. A. Larson to C. J. Watson and certificate No. 9983 issued; certificate No. 8781 for 1 share was transferred by O. B. Watts to M. J. Allen and certificate No. 9984 issued; certificate No. 8721 for 50 shares was transferred by A. L. Dodson to G. H. Stevenson and certificate No. 9985 issued.

INSTRUCTIONS: Rule a transfer book similar to that in Illustration No. 100, and record the foregoing transactions in it.

CHAPTER XLIV

THE BALANCE SHEET

Content and Form of Balance Sheet

All Balance Sheets are alike in that they show three essential items of information: total assets, total liabilities and total proprietorship. They are not alike with reference to the number and nature of the items of which the assets, liabilities and proprietorship are composed. The assets and liabilities are affected to a considerable degree by the nature of the operations performed. The proprietorship is affected by the legal form of organization.

The customary form of the Balance Sheet which we have studied in previous chapters can be made more useful if it is designed to provide comparative data and is supplemented by statements which provide an analysis of the major items.

It is the purpose of this chapter to consider (a) some of the items of information which may appear on a Balance Sheet of a manufacturing firm operated as a corporation which are not ordinarily found on the Balance Sheet of a mercantile company having the non-corporate form, and (b) some of the adaptations which may be made in the orthodox form of the Balance Sheet.

Inventories

The activities of a manufacturing business consist in the purchasing of materials, the performance of operations on these materials which result in a change in their form and utility, and the sale of the manufactured product. Usually there are three kinds of goods or materials on hand: first, materials on which manufacturing operations have not yet begun, known as *materials* or *raw materials;* second, materials in the factory on which manufacturing operations are being performed, termed *goods in process;* third, materials on which manufacturing operations have been completed and are now being held for sale, termed *finished goods*. On the Balance Sheet these inventories are shown as follows:

INVENTORIES:			
Materials	18,259	50	
Goods in Process	25,215	65	
Finished Goods	19,482	85	62,958

All of these inventories are customarily valued on the same basis, cost or cost to replace, whichever is the lower.

Fixed Assets

Every business has need for some fixed assets. The amount and kind varies with the size of the business and the nature of its operations. The small retail store may possess only the furniture and fixtures used in the store. In many cases the building in which the business is conducted is not owned by the proprietor. On the other hand, large department stores and wholesale houses in many cases own the buildings in which they operate, and thus have the additional fixed assets of buildings and land.

The manufacturing business may or may not own the building in which it operates, depending to a considerable degree on the size of the business. In addition to the furniture and fixtures, building and land required by the merchant, the manufacturer must use machinery and equipment in the manufacture of his product. In some cases he obtains this equipment by renting it and paying for its use, but in most cases he purchases it.

The usual practice is to value all fixed assets except land at cost less depreciation. Land is ordinarily not subject to depreciation so is shown at cost price.

On the Balance Sheet fixed assets are shown as follows:

FIXED ASSETS:			
Office Equipment..........	15,000.00		
Less Res. for Depreciation	1,500.00	13,500	
Machinery and Equipment	100,000.00		
Less Res. for Depreciation	15,000.00	85,000	
Buildings.................	80,000.00		
Less Res. for Depreciation	7,500.00	72,500	
Land............................		50,000	
Total Fixed Assets................			221,000

Intangible Assets

Assets termed *intangible assets* may appear on the Balance Sheet. The intangible asset of most frequent occurrence is *goodwill.* Webster's New International Dictionary defines goodwill as "the custom of any trade or business; the favor or advantage in the way of custom which a business has acquired beyond the mere value of what it sells, whether due to the personality of those conducting it, the nature of its location, its reputation for skill, promptitude, etc., or any other circumstance incidental to the business and tending to make it permanent." More briefly it is defined by the Treasury Department of the United States

as follows: "Goodwill represents the value attached to a business over and above the value of the physical property." Goodwill arises as a result of a business winning the favor of its customers with the consequent probability that they will return to trade in the future. It is the value attached to the "business" which a firm has established.

Although goodwill is intangible and its amount is difficult to ascertain, it is nevertheless an asset of value, and a company which has established goodwill has the right to receive a compensation for it if the business is sold. For example, if a well-known and prosperous firm sells its entire business to another and retires from the field, leaving the new owners without competition from the old, it is only just that the selling company should receive some compensation for the reputation it has established. The members of the selling company have "earned" the "good will" of their patrons, and, since a large portion of the trade already established will accrue to the purchasing company, a price may be placed upon this, and this amount may properly be entered on the books of the new company as an asset.

Goodwill should be entered on the records only when it has been purchased. Until goodwill is purchased, it has no established value and should not be shown in the records or on the reports. Goodwill frequently arises in the case of the purchase of a partnership by a corporation at a price which is more than the net worth of the partnership.

Goodwill is shown on the Balance Sheet as follows:

INTANGIBLE ASSETS:			
Goodwill..............................			50,000

Goodwill is shown originally at cost price. If the company desires to reduce its amount, this can be done by charging Profit and Loss and crediting Goodwill for the amount to be written off each year.

Long-term or Fixed Liabilities

The long-time liabilities most frequently found on the Balance Sheet are:

(1) Mortgages Payable.
(2) Bonds Payable.

The most simple form of long-time borrowing is the ordinary mortgage or "deed of trust." A mortgage transfers the title of specific property from the mortgagor to the mortgagee with the provision that the title will be reinvested in the mortgagor if the

note which accompanies the mortgage is paid at the specified time. Mortgages may be classified as "real estate mortgages" and "chattel mortgages." The former conveys the title to real estate as security for the debt evidenced by the accompanying note, while the latter conveys the title to personal property for the same purpose. In the latter case, the mortgage is usually for a relatively short time and is more frequently given by an individual to obtain property for personal use.

The mortgage is not used extensively by large firms as a means of securing money, as evidenced by its infrequent occurrence on the Balance Sheets of such firms. It is used more frequently by sole proprietors, partnerships and small corporations as a means of securing funds with which to purchase real estate.

A bond is a promise under seal to pay a definite sum of money at a stated time with an agreement to pay interest at a stipulated rate. Usually there is a pledge of certain properties as security for payment of both principal and interest, but bonds may be issued without being accompanied by a mortgage or being secured by a particular piece of property.

A corporation may borrow money by issuing either bonds or notes. If it desires to borrow only a small amount or for a short time, notes are usually used; but if the amount to be borrowed is large, or is for a long period of time, bonds are issued. The difference between a note and a bond of a corporation is often not very great, but the bond is usually more formal in phraseology and is executed under seal. Notes and mortgages are executed singly, as agreements, ordinarily between two parties, while bonds are issued in large numbers and are offered to the general public. Although the sole proprietor and the partnership may legally issue bonds, they seldom do so, for the investing public does not care to invest in a business which may be terminated at any time.

Showing of Proprietorship of Corporation on Balance Sheet

Proprietorship in the corporate form is divisible into two items: capital stock and surplus. It is possible that capital stock alone may constitute proprietorship if (a) the company is just organized and no earnings have been made, or (b) if the earnings have all been consumed by losses or dividends.

Sometimes additional items are listed under proprietorship on the Balance sheet of a corporation, but on analysis it will be found that they are a part of either capital stock or surplus. If both common stock and preferred stock are issued, the amount of each should be shown on the Balance Sheet.

If a corporation has incurred losses in excess of its accumulated surplus, the amount of this excess, which is termed a *deficit,* should be shown as a subtraction from the capital stock.

Illustration of the Method of Showing Proprietorship in a Corporation

The simplest method of showing the proprietorship on the Balance Sheet of a corporation is under two headings as follows:

Capital Stock	200,000		
Surplus	51,225	50	
Proprietorship			251,225 50

This indicates (1) that all the authorized capital stock of the corporation has been issued and is outstanding, and (2) that since the issuance of the capital stock, the present worth of the corporation through its earnings has increased $51,225.50.

If a part of the capital stock has not been issued, the proprietorship of the corporation should be shown as follows:

Capital Stock Authorized	200,000		
Less Unissued Stock	50,000		
Capital Stock Outstanding	150,000		
Surplus	51,225	50	
Proprietorship			201,225 50

This shows (1) that $50,000.00 of the capital stock authorized has not yet been issued, and (2) that proprietorship of the company has been increased $51,225.50 through earnings.

In case the total capital stock has been issued, but some part of it has been donated back to the company or purchased by the company, the proprietorship of the corporation should be shown as follows:

Capital Stock	200,000		
Less Treasury Stock	20,000		
Capital Stock Outstanding	180,000		
Surplus	51,225	50	
Proprietorship			231,225 50

This shows (1) that $20,000.00 of the capital stock which has been issued has been returned to the company and is being held in the treasury, and (2) that the proprietorship of the company has been increased $51,225.50 by earnings.

If desired, the surplus of the corporation may be divided so as to show the amount earned in previous years and the amount earned during the current year. In this case, the proprietorship of the corporation should be as shown on page 670.

Capital Stock		200,000	
Surplus:			
Previous Surplus	35,529.65		
Earnings for 192	15,695.85		
Total Surplus		51,225.50	
Proprietorship			251,225.50

If both preferred stock and common stock are issued by the corporation, it is necessary to show the amount of each as a separate item as follows:

Common Stock	100,000	
7% Cumulative Preferred Stock	100,000	
Total Capital Stock Outstanding	200,000	
Surplus	51,225.50	
Proprietorship		251,225.50

If the corporation has incurred a deficit, this should be shown as follows:

Capital Stock	200,000	
Deficit	25,550.75	
Proprietorship		174,449.25

Illustration of Balance Sheet

A Balance Sheet containing the asset, liability and proprietorship items discussed in this chapter is shown in Illustration No. 101.

Comparative Balance Sheet

The Balance Sheet is a picture of the financial condition of a business at a specific time. If pictures of the financial condition at two or more times may be had so a comparison can be made, changes can usually be seen which indicate tendencies. For example, if a Balance Sheet of a business at the beginning of the year can be compared with a Balance Sheet of the same business at the end of the year, the changes which have taken place in its assets, liabilities and proprietorship can be seen and often these changes indicate whether the business is becoming more prosperous or less so. Business men have found that such comparisons are quite valuable.

To facilitate the making of such comparisons, the accountant prepares a formal report known as a *comparative Balance Sheet.* A simple form of a comparative Balance Sheet is shown in Illustration No. 102.

THE KEYSTONE MANUFACTURING CO.

Balance Sheet, December 31, 1926

Assets			
Current Assets:			
Cash		7,950 10	
Notes Receivable		2,250 12	
Accounts Receivable	25,496.15		
Less Reserve for Bad Debts	1,274.81	24,221 34	
Inventories:			
Materials	18,259.50		
Goods in Process	25,215.65		
Finished Goods	19,482.85	62,958	
Total Current Assets			97,379 56
Fixed Assets:			
Office Equipment	15,000.00		
Less Reserve for Depreciation	1,500.00	13,500	
Machinery and Equipment	100,000.00		
Less Reserve for Depreciation	15,000.00	85,000	
Buildings	80,000.00		
Less Reserve for Depreciation	7,500.00	72,500	
Land		50,000	
Total Fixed Assets			221,000
Intangible Assets:			
Goodwill			50,000
Deferred Charges to Expense:			
Unexpired Insurance		1,798 76	
Prepaid Advertising		1,432 95	
Supplies on Hand		849 98	
Total Deferred Charges			4,081 69
Total Assets			372,461 25
Liabilities and Proprietorship			
Current Liabilities:			
Notes Payable		5,125 50	
Accounts Payable		14,875 50	
Accrued Interest on Bonds		8,999	
Accrued Payroll		2,235 75	
Total Current Liabilities			31,235 75
Fixed Liabilities:			
Mortgage Payable		40,000	
Bonds Payable		100,000	
Total Fixed Liabilities			140,000
Total Liabilities			171,235 75
Proprietorship:			
Capital Stock Authorized	200,000.00		
Capital Stock Unissued	50,000.00		
Capital Stock Outstanding		150,000	
Surplus		51,225 50	
Total Proprietorship			201,225 50
Total Liabilities and Proprietorship			372,461 25

Illustration No. 101, Balance Sheet

There are no very striking changes shown by the comparative Balance Sheet of James Canning, and, in fact, striking changes in the assets, liabilities and proprietorship are not to be expected in the case of a normal business. The fact that appears most prominently on the comparative Balance Sheet of Canning is that the proprietorship or net investment has increased from $16,990.00 to $18,737.00. This indicates that a profit of $1,747.00 has been made during the year. This is on the assumption, of course, that no additional investment has been made during the year and that there have been no withdrawals of capital. The profits of $1,747.00, represent a return of approximately ten per cent on the average investment of the year, which is normally a fair return on capital.

All the current assets except cash have increased somewhat during the year. These increases seem to be only such as would be expected in a growing business. The increased inventory probably indicates an increase in volume of sales, which necessitates a larger stock on hand. This should be verified by a comparison of the sales of the year with the sales of the previous year. If the sales have not increased, but the inventory has, it may indicate an accumulation of unsalable goods, or that large and probably unwise purchases may have been made.

An examination of the fixed assets indicates that a normal amount of depreciation has been charged off. The increase in the value of the delivery equipment may have been caused by an increase in sales. This can be verified by a comparison of the sales of the present year with those of the past year.

An examination of the liabilities shows that the bank loan has been paid and that this has been accomplished without any undue increase in the accounts payable or notes due to trade creditors. The ratio of current assets to current liabilities is over three to one, which is satisfactory. This ratio has also improved during the year, since it was approximately two and one-half to one at the beginning of the year.

Lastly, the proprietorship or net worth is exceedingly large in proportion to the assets, which indicates that the owner has sufficient capital with which to conduct his business without relying to any great extent on creditors to furnish capital. It also indicates that the business is capable of considerable expansion without being "cramped" for capital.

The general conclusion that would be drawn from such an examination is that the business has been increasing in volume and on a favorable basis. The latter is borne out by the change in proprietorship. The former is indicated by the comparative Balance Sheet, but can be determined more clearly from a comparative Statement of Profit and Loss such as is illustrated and discussed in the following chapter.

JAMES CANNING
COMPARATIVE BALANCE SHEET, DECEMBER 31, 192

Assets	1919				1920			
CURRENT ASSETS—								
Cash			1,800				1,500	
Notes Receivable			150				100	
Accounts Receivable	2,350				2,900			
Less: Reserve for Bad Debts	50		2,300		68		2,832	
Merchandise Inventory			3,500				4,050	
TOTAL CURRENT ASSETS			7,750				8,482	
FIXED ASSETS—								
Delivery Equipment	1,650				2,950			
Less: Res. for Depreciation	330		1,320		590		2,360	
Store Equipment	725				725			
Less: Res. for Depreciation	36	25	688	75	72	50	652	50
Office Equipment	275				275			
Less: Res. for Depreciation	13	75	261	25	27	50	247	50
Building	6,000				6,000			
Less: Res. for Depreciation	180		5,820		360		5,640	
Land			4,000				4,000	
TOTAL FIXED ASSETS			12,090				12,900	
TOTAL ASSETS			19,840				21,382	
Liabilities and Proprietorship								
CURRENT LIABILITIES—								
Wages Accrued	50				65			
Notes Payable—Bank	1,000							
Notes Pay.—Trade Creditors	200				700			
Accounts Payable	1,600				1,880			
TOTAL CURRENT LIAB.			2,850				2,645	
PROPRIETORSHIP—								
James Canning—Net Worth			16,990				18,737	
TOTAL LIAB. AND PROP.			19,840				21,382	

Illustration No. 102, Comparative Balance Sheet

Exhibits

An *exhibit*, from an accounting point of view, is a summarized statement of material facts with reference to the financial condition of a business. The accountant usually prepares three exhibits at the end of each fiscal period.

1. The Balance Sheet, which is usually designated as Exhibit A.

2. The Statement of Profit and Loss, which is usually designated as Exhibit B.
3. An Analysis of the Surplus Account, which is usually designated as Exhibit C.

If other exhibits are prepared they are designated alphabetically.

The tendency at the present time is to make these exhibits brief and condensed so that a bird's-eye view of the financial condition of a business can be obtained from them. The individual items which compose the totals shown on the exhibits are provided by means of supplementary statements which accompany the exhibits as explained in the following paragraph.

Schedules

A schedule is a detailed list showing the items which compose a total shown on an accounting report. Schedules are usually prepared in connection with the Balance Sheet. They are usually numbered consecutively. Schedules may be used to provide detailed information with reference to the cash balance, the notes receivable and payable, the accounts receivable and payable, or any other item on the Balance Sheet the composition of which is deemed to be of importance. It is customary to indicate on the Balance Sheet that a schedule accompanies the Balance Sheet by placing the number of the schedule immediately after the item to which it pertains. For example, the John Brown Company may have a cash balance of $4,240.00 at the time its Balance Sheet is prepared. This amount may be represented by deposits in two banks, by a petty cash fund, and by a cash balance in the hands of a branch office. On the Balance Sheet the cash balance will be shown as follows:

Cash (Schedule No. 1)	4,240			

Schedule No. 1, which will be attached to the Balance Sheet, will appear as follows:

SCHEDULE No. 1
THE CASH BALANCE

Mercantile Trust Company	1,860			
First National Bank	1,682	40		
Petty Cash Fund	100			
St. Louis Branch Office	597	60		
Total			4,240	

Other schedules showing detailed information concerning other items on the Balance Sheet would be shown in the same manner.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

(a) In what respect are all Balance Sheets the same? (b) In what respect may a Balance Sheet for a corporation differ from one for a partnership or sole proprietorship?

— 2 —

(a) State some of the differences between the nature of the transactions performed by a mercantile and a manufacturing business. (b) How will these differences affect the information shown on the Balance Sheet?

— 3 —

The firm of Meyer & Haskins is a partnership dealing in automobile supplies. Later they incorporate as The Meyer-Haskins Supply Company, but carry on the same operations. What differences would there be between the Balance Sheet of Meyer & Haskins and that of The Meyer-Haskins Supply Company?

— 4 —

A few years after incorporating, the company decides to manufacture certain supplies which it has formerly been purchasing, and purchases the necessary buildings and equipment for this purpose. Compare the Balance Sheet of The Meyer-Haskins Supply Company at time of the company's organization with its Balance Sheet after it commences manufacturing operations.

— 5 —

"The corporation performs certain transactions which the sole proprietorship and partnership do not." To what kind of transactions does this statement refer?

— 6 —

D. L. Burkhart operates a retail clothing business. He sells the business to a corporation formed to continue its operation. At the time of the sale his net proprietorship is $32,500.00. He receives in payment for this $10,000.00 cash and 300 shares of stock at a par value of $100.00 per share. How would this transaction be recorded on the books of the corporation?

— 7 —

Explain the nature of the goodwill involved in the preceding question.

— 8 —

Should this amount of goodwill remain on the books of the corporation indefinitely or should it be written off? Explain in detail and state how it could be written off.

— 9 —

Name some other intangible asset and give a practical illustration of application.

— 10 —

What is the difference between a bond and a note? Explain in detail and illustrate the use of each.

— 11 —

A corporation is organized with $900,000.00 capital stock. Two years later, when its assets amount to $2,315,416.82, and its liabilities amount to $1,415,416.82, the proprietorship remains at $900,000.00, which represents the original capital stock. How can you account for this lack of change in the proprietorship?

— 12 —

It is reported to you that a certain large steel company has increased its proprietorship $1,250,000.00. Mention some of the possible ways in which this increase may have been secured.

— 13 —

Statistics show that the greater number of corporations are engaged in the business of manufacturing and merchandising, and the smaller number in professional work, such as accounting and law. What is there about these different kinds of businesses that makes the corporate form so important in some fields and very much less so in others?

— 14 —

Two school supply stores in the same district carry about the same grade of materials at about the same price. The success of the two stores, however, is not the same. The owner of Store A, which receives seventy-five per cent of the trade of the whole district, believes in being pleasant and cordial to the school children, who are his principal customers. The owner of Store B never shows any interest in them nor makes any effort to please them. What value of business management has Dealer B overlooked? How will Dealer A be able to prove to Dealer B the value of this policy of service and the reason for his holding seventy-five per cent of the trade?

— 15 —

In what way can a large corporation whose chief executives can not have any personal contact with their customers establish goodwill?

— 16 —

Compare the nature of the inventories for a business engaged in retail selling and for a business engaged in manufacturing, and show the importance of this distinction with reference to the construction of the Balance Sheet.

CHAPTER XLV

THE STATEMENT OF PROFIT AND LOSS

Relationship of Statement of Profit and Loss to Balance Sheet

Business activities are carried on primarily for the purpose of increasing the capital employed in the conduct of the business. It is for this reason that capital is invested in the carrying on of industry and trade. In the individual firm, the increase of capital which results from the operations of the business is shown by an increase in proprietorship. To ascertain the success of the activities of any specific business, it is necessary (a) to know the increase in the proprietorship which has resulted from the operations of the business, and (b) to have a summary of the income-producing efforts which have resulted in the increase. The Balance Sheet shows at any particular time the assets, the liabilities and the resulting net worth, but it does not show how the business progressed during any given period or why the proprietorship increased. This information must be obtained by another report which provides a summary of the expenses and income.

Two groups of forces or agencies are found in every business: those that tend toward producing an income or profit, and those that tend toward diminishing the income. The Statement of Profit and Loss is a chronicle of the interaction of these two forces, and is consequently of prime importance to the executive of a business on whose control the progress of the enterprise so largely depends. The Balance Sheet shows the condition of affairs after certain changes have been brought about; the Profit and Loss Statement shows the causes of these changes. Each is complementary to the other, and when they are read together, it is possible to tell the history of the business activities for the period concerned.

Form of Statement of Profit and Loss for Corporation

The form of the Statement of Profit and Loss does not differ essentially whether made for a sole proprietorship, a partnership or a corporation. The main facts which should always be shown on the Statement of Profit and Loss are:

(1) The source of the income (sales of commodities or services).

(2) The cost of securing that commodity or service, whether by purchase or production.

(3) The operating expenses of the business.
(4) The income received from miscellaneous sources.
(5) The deductions from income.

The Statement of Profit and Loss may contain a sixth division which will show the disposition of the net income. In the sole proprietorship and in the partnership, the net profit is either withdrawn or credited direct to the owners. In the corporation, the disposal of the net profit is not so simple a matter. It may be distributed as dividends, carried to the Surplus account, set aside for some specific purpose, or such other disposition made of it as the directors, acting in accordance with the charter and the by-laws, may deem desirable. One who is interested in the earnings of the business will usually be interested in the disposition of these earnings, so that it is desirable to show this disposition on the Statement of Profit and Loss. Sometimes the disposition to be made of the earnings has not been decided at the time the Statement of Profit and Loss is made, in which case it is impossible to add the final section.

The principal items of information shown by the Statement of Profit and Loss are shown by the following skeleton outline:

Section 1. Gross Income from Sales.
Less: Returns and Allowances.
Net Income from Sales.

Section 2. Cost of Goods or Services Sold.
Gross Profit on Sales.

Section 3. Operating Expenses.
Net Profit on Sales.

Section 4. Other Income.
Gross Income.

Section 5. Deductions from Income.
Net Income for Period.

Section 6. Appropriation of Income.
Net Amount Carried to Surplus.

Stated in the form of equations, the Statement of Profit and Loss may be represented by the following:

Net Sales − Cost of Goods Sold = Gross Profit on Sales.

Gross Profit on Sales − Operating Expenses = Net Profit on Sales.

Net Profit on Sales + Other Income = Gross Income.

Gross Income − Deductions from Income = Net Income for Period.

Net Income − Appropriations of Income = Net Amount Carried to Surplus.

Statement of Profit and Loss for Different Types of Industries

The outline on page 678 can be used as the basis for the Statement of Profit and Loss for any business regardless of the nature of its operations. Although the general form will be the same, the individual items which make up the different sections will vary in different businesses.

The Statement of Profit and Loss affords a summary of the expense and income operations of the business, and these operations vary to a considerable degree. Thus, the principal source of income for a mercantile store is sales; of a bank, the interest which it receives on loans; of a firm of lawyers, the fees received for services; of a commission house, the commissions received on sales. The first section of the Statement of Profit and Loss of each of these firms will vary accordingly. In the same manner, the operations of the business vary, and these variations affect the individual items in the other sections of the Statement of Profit and Loss.

In previous chapters the Statement of Profit and Loss for a mercantile firm has been discussed. In the present chapter the Statement of Profit and Loss for a manufacturing firm will be discussed and illustrated.

Statement of Profit and Loss for Manufacturing Business

The chief feature which distinguishes the Statement of Profit and Loss of a manufacturing business from that of a mercantile business is the section showing "Cost of Goods Sold." In a mercantile business, goods are purchased, placed on the shelves and sold without any operations being performed on them. In a manufacturing business, the materials purchased are subjected to the operations of the factory, which transform them into the finished product offered for sale.

In the manufacturing process, it is necessary to employ labor and to incur expenses. Consequently, the cost of the finished product consists of the cost of the *materials* used plus the cost of the *labor* employed plus the *expenses* incurred in its manufacture. The calculation of the cost of the goods sold is complicated by the fact that at the end of each fiscal period there are materials on hand which have not been used, jobs in the factory which are not completed, and finished goods which have not been sold. In ascertaining the cost of goods sold, therefore, it is necessary to consider three different inventories on hand at the beginning of the fiscal period, three different inventories on hand at the end of the fiscal period, the purchase of materials during the period, the cost of labor for the period, and the manufacturing expenses incurred during the period.

The information which must be considered in ascertaining the cost of goods sold is shown in tabular form on page 680.

Inventories at Beginning of Period:
- Raw Materials.
- Goods in Process.
- Finished Goods.

Material Purchases.

Labor.

Manufacturing Expense.

Inventories at End of Period:
- Raw Materials.
- Goods in Process.
- Finished Goods.

To have information with reference to each of these items, it is necessary to have accurate records showing the cost incurred in connection with each part of the manufacturing process. In Illustration No. 103 the costs which accumulate in the course of manufacture are shown as they arise in the various stages.

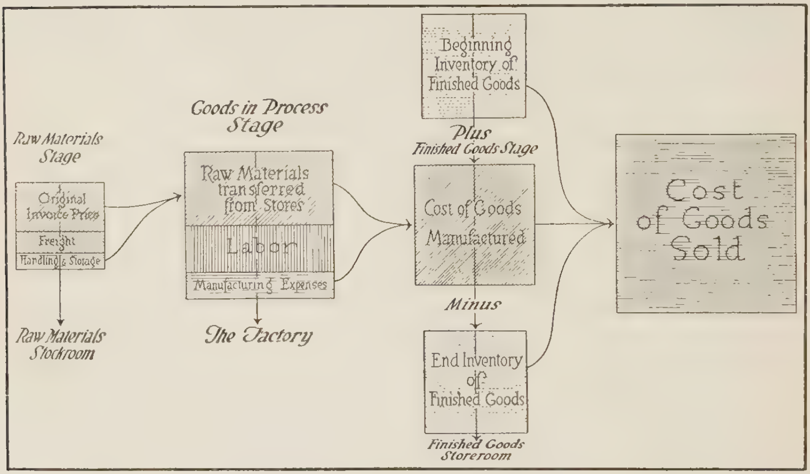


Illustration No. 103, Diagram Showing Costs Which Accumulate in the Course of Manufacture

Raw materials purchased for manufacturing purposes are placed in the storeroom until they are needed in the factory. The costs arising in connection with the raw materials consist of the original invoice price, the cost of transporting them to the storeroom, and the charges resulting from the storing of the materials before they are transferred to the factory. The raw materials are transferred from the storeroom to the factory as they are needed in the manufacturing operations. As they pass

on in the manufacturing process, other costs develop. These costs are labor and manufacturing expense. Labor is the wages paid employees who manufacture the products of the factory (usually referred to as direct labor). Manufacturing expense includes the salary of the superintendent and his assistants (usually referred to as indirect labor), repairs and depreciation on the buildings and equipment, heat, light, power, and others of similar nature.

When the raw material has passed through the manufacturing process, the articles pass into the finished-goods stage. In this stage they correspond to the *purchases* of the mercantile firm. There is usually an inventory of finished goods at the beginning and at the end of the period. To ascertain the cost of goods sold, it is necessary to add the cost of the goods manufactured to the beginning inventory and subtract the ending inventory. It is easy to see the similarity between this method and the one employed in determining the cost of goods sold in a mercantile business where the purchases are added to the beginning inventory and the ending inventory subtracted.

The significance of determining accurately the nature of the costs in Section 2 of the Statement of Profit and Loss has thus been illustrated. While no detailed explanation has been given of the various methods of computing and recording costs, the essential facts have been explained. The result of subtracting Section 2 from the net sales on the Statement is to ascertain the gross profit on sales. It is then necessary to show the cost of operating the business; this cost is ordinarily composed of at least two divisions, selling expenses and general expenses. When these are subtracted from the gross profit, the result is net profit on sales. The items of other income are added to the net profit on sales to obtain the gross income. The gross income minus the deductions from income gives the net income for the period. Finally, the net income may be left intact, or, as in Illustration No. 104, it may be appropriated in part for dividends and for other purposes.

Illustration of Statement of Profit and Loss

A Statement of Profit and Loss, illustrating the principles discussed in the preceding pages, is shown in Illustration No. 104.

Simplification of Statement of Profit and Loss by Use of Schedules

From the statement shown in Illustration No. 104 it may be seen that numerous items of expense and income arise in connection with the operations of a manufacturing business. In a large manufacturing business there are many other items in addition to those shown in Illustration No. 104. If all these items are shown on the Statement of Profit and Loss, it becomes very lengthy and difficult to read, and the main facts become some-

INDIANA AUTOMOBILE CO.

Statement of Profit and Loss for Year Ending December 31, 1926

Income from Sales:				
Gross Sales			477,525 50	
Less Returns and Allowances			2,692 35	
Net Sales				474,833 15
Cost of Goods Sold:				
Raw Materials:				
Inventory, December 31, 1925		35,215.65		
Purchases	120,326.75			
Less Ret. and Allow.	5,125.50			
Net Purchases	115,201.25			
Freight and Cartage In	1,105.75	116,307.00		
Total Materials Available for Use		151,522.65		
Less Inventory December 31, 1926,		21,515.45		
Cost of Materials Consumed			130,007 20	
Labor			151,225 50	
Manufacturing Expenses:				
Superintendence		15,175.50		
Heat, Light, and Power		10,376.35		
Factory Supplies		5,221.15		
Machinery Repairs		2,347.95		
Sundry Factory Expenses		915.25	34,036 20	
Total Cost of Goods Placed in Process			315,268 90	
Goods in Process, December 31, 1925			50,313 75	
Total Goods in Process During Period			365,582 65	
Goods in Process, December 31, 1926			38,221 45	
Cost of Goods Manufactured			327,361 20	
Finished Goods, Inventory Dec. 31, 1925			42,345 20	
Goods Available for Sales			369,706 40	
Finished Goods Inventory Dec. 31, 1926			36,910 35	
Cost of Goods Sold				332,796 05
Gross Profit on Sales				142,037 10
Operating Expenses:				
Selling Expenses:				
Salaries and Commissions		17,725.75		
Traveling Expenses		8,129.10		
Advertising		25,134.45	50,989 30	
General Expenses:				
Salaries		10,050.75		
Stationery and Printing		1,525.75		
Miscellaneous Expenses		825.50	12,402	63,391 30
Net Profit on Sales				78,645 80
Other Income:				
Interest on Notes Receivable				896 25
Gross Income				79.542 05
Deductions from Income:				
Interest on Bonds				3,661
Net Profit for the Year				75,881 05
Less Appropriation for Dividends				20,000
Carried to surplus				55,881 05

Illustration No. 104, Statement of Profit and Loss

what obscured by the details. Accordingly, it is becoming a practice to reduce the Statement of Profit and Loss to the main data, and to supplement this brief statement of the condition of the company with schedules of the details. These detailed reports include a Schedule of Cost of Goods Sold, a Schedule of Operating Expenses, and possibly a Schedule of Other Income and Deductions.

Schedule of Cost of Goods Sold

Since the section showing the cost of goods sold is usually the largest section of the Statement of Profit and Loss, it is usually the first to be placed in schedule form. A schedule showing cost of goods sold is given in Illustration No. 105.

INDIANA AUTOMOBILE COMPANY

SCHEDULE No. 1—COST OF GOODS SOLD

To Accompany Profit and Loss Statement for Year Ending December 31, 1926

RAW MATERIALS						
Inventory December 31, 1925			35,215	65		
Purchases	120,326.75					
Less Ret. and Allow.	5,125.50	115,201.25				
Freight and Cartage In		1,105.75	116,307			
Total Cost of Materials Available for Use			151,522	65		
Less Inventory December 31, 1926			21,515	45		
Cost of Materials Consumed					130,007	20
LABOR					151,225	50
MANUFACTURING EXPENSES						
Superintendence			15,175	50		
Heat, Light and Power			10,376	35		
Factory Supplies			5,221	15		
Machinery Repairs			2,347	95		
Sundry Factory Expenses			915	25	34,036	20
Total Cost of Goods Placed in Process					315,268	90
Goods in Process, December 31, 1925					50,313	75
Total Goods in Process During Period					365,582	65
Goods in Process, December 31, 1926					38,221	45
Cost of Goods Manufactured					327,361	20
Finished Goods Inventory Dec. 31, 1925					42,345	20
Goods Available for Sale					369,706	40
Finished Goods Inventory Dec. 31, 1926					36,910	35
COST OF GOODS SOLD					332,796	05

Illustration No. 105, Schedule of Cost of Goods Sold

Other Schedules

A Schedule of Operating Expenses may include a detailed tabulation of the nature of the salaries under selling expense, as for sales managers, salesmen and clerks, with the amount for each group. Under advertising expense might be given an itemized account of the outlays for each kind of advertising, as local, media, other city newspaper, periodicals and bill posters. In addition to these, statements may be made of any item where specific and extraordinary information is needed. For example, the general manager and sales manager would be interested in data of various kinds concerning sales by departments, if the business were so organized; by geographical districts, if sales plans were based on a territorial division; or by branches, if more than one plant is maintained.

In a later chapter, a discussion will be given of reports that might be made for the use of executives. The purpose of this chapter is to explain the possibilities in the correct use of the Statement of Profit and Loss.

Illustration of Condensed Statement of Profit and Loss

Illustration No. 104, when shown in condensed form, appears as in Illustration No. 106.

INDIANA AUTOMOBILE COMPANY

STATEMENT OF PROFIT AND LOSS FOR YEAR ENDING DECEMBER 31, 1926

Gross Sales	477,525	50		
Less Returns and Allowances	2,692	35		
Net Sales			474,833	15
Cost of Goods Sold, Schedule No. 1			332,796	05
Gross Profit on Sales			142,037	10
Operating Expenses, Schedule No. 2				
Selling Expenses	50,989	30		
General Expenses	12,402		63,391	30
Net Profit on Sales			78,645	80
Other Income, Schedule No. 3			896	25
Gross Income			79,542	05
Deductions from Income, Schedule No. 4			3,661	
Net Income for the Year			75,881	05
Appropriations for Dividends			20,000	
Carried to Surplus			55,881	05

Illustration No. 106, Simplified Form of Statement of Profit and Loss

This illustration of a simplified statement, with accompanying schedules of detailed information, shows that while reports should conform to correct principles and best practice, they must be sufficiently flexible to meet the particular needs of the firm which is being served. In the case just cited, stockholders and prospective investors would ordinarily not care for further information than is supplied by the brief statement, while the board of directors and officers would need details provided by the schedules for planning future policies. The statement in its complex form with the accompanying schedules would probably be more satisfactory, since it can be read without confusion and with less analysis than the lengthy report. The separate schedules would be of special help to departmental managers. For example, the production manager as well as the manager of the stockroom would be aided by the schedule of cost of goods sold. The sales and advertising managers would need the schedule of operating expenses. In fact, by this method, the needs of all parties interested in the financial affairs of the corporation are satisfied.

Analytical Statements

An *analytical statement* usually gives a more detailed analysis than that provided by a schedule. Consequently, analytical statements are used more frequently in connection with the analysis of items appearing on the Statement of Profit and Loss, such as expense accounts. For example, if all selling expenses are shown under one heading on the Statement of Profit and Loss, an analytical statement may be made which will show of what the selling expenses consist.

There is no uniformity in the use of the terms "schedule" and "analytical statement". Some accountants do not make use of the term "analytical statement", and consequently they denote as schedules all statements supplementary to the Balance Sheet and the Statement of Profit and Loss. The use of these terms in the manner explained, however, is logical and in conformity with current practice.

Analytical statements are numbered in consecutive order and are referred to on the Statement of Profit and Loss in the same manner that a schedule is referred to on the Balance Sheet. To illustrate: It may be assumed that the selling expenses of the John Brown Company for the year are $16,280.00, and that this item includes the amounts spent for advertising, for salaries of salesmen, for traveling expenses of salesmen, and for miscellaneous selling expenses. On the Statement of Profit and Loss the selling expenses may be shown as follows:

Selling Expenses (Analytical Statement No. 1)	16,280	

Analytical Statement No. 1, which will be attached to the Statement of Profit and Loss, will appear as follows:

ANALYTICAL STATEMENT No. 1

Analysis of Selling Expenses

Advertising	3,142	45	
Salaries of Salesmen	7,284	55	
Expenses of Salesmen	4,146	78	
Miscellaneous Selling Expenses	1,706	22	
Total Selling Expenses			16,280

In many cases a more detailed analysis than is provided by the foregoing statement will be desired.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The Balance Sheet of the Blanco Company shows an increase in proprietorship of $258,976.00 over a period of ten months. Inasmuch as this fact assures anyone interested in the corporation that it has "made money," why should there be need for a Statement of Profit and Loss?

— 2 —

What information will be shown on the Statement of Profit and Loss in addition to the net income, which is the same as the increase in proprietorship as shown by the Balance Sheet?

— 3 —

Explain the following equations: (a) "Net Sales - Cost of Goods = Gross Profit on Sales," (b) "Gross Profit on Sales − Operating Expenses = Net Profit on Sales," (c) "Net Profit on Sales + Other Income = Gross Income," (d) "Gross Income − Deductions from Income = Net Income for Period," (e) "Net Income − Appropriations of Income = Net Amount carried to Surplus."

— 4 —

After the net income has been carried to surplus, what accounts in the ledger will equal the net proprietorship (a) if all of the stock has been subscribed for and sold for cash, (b) if only three-fourths of the stock has been subscribed and sold for cash, (c) if all of the stock has been sold but only three-fourths of the par value collected, and (d) if only three-fourths of the stock has been sold and only one-half of the sale price collected.

— 5 —

State some of the facts that will be shown on a Statement of Profit and Loss prepared for a manufacturing business which would not be shown on a Statement of Profit and Loss prepared for a mercantile business.

— 6 —

Explain the meaning of *raw material* and give examples.

— 7 —

Explain the meaning of *material in process* and give examples.

— 8 —

Explain the meaning of *finished goods* and give examples.

— 9 —

Explain the meaning of *manufacturing expense* and give examples.

— 10 —

Under what conditions would labor cost be an asset?

— 11 —

What is a schedule? Give an illustration.

— 12 —

A well-organized accounting system includes the use of accurate records as the basis of valuing inventories. (a) Why should this be more desirable than making valuations from opinion and comparison with other businesses? (b) Would it make any difference in the inventory records if the valuations were to be made for a small manufacturing business producing but one commodity or for a large company manufacturing a variety of products? Explain.

— 13 —

Name the persons interested in a Statement of Profit and Loss who would want the detailed report and those who would prefer the summarized report with accompanying schedules.

— 14

"While reports should conform to correct principles and best practice, they must be sufficiently flexible to meet the particular needs of the firm which is being served." Just how does the use of schedules meet this requirement?

— 15 —

During a time of small profits, people usually discuss the question of "reducing expenses." How will a Statement of Profit and Loss assist them?

— 16 —

What information on the Statement of Profit and Loss would be of interest to a banker contemplating a loan to the business concern for which the Statement of Profit and Loss is prepared?

— 17 —

Explain the meaning of the following item appearing under Other Income on the Statement of Profit and Loss, "Interest on bank balances $285.65."

— 18 —

(a) How would the information given in the quotation in the preceding question be obtained? (b) Under what conditions would the bank allow interest on daily deposits? (c) How is the interest usually calculated? (d) How is it reported to the depositor? (e) How is it recorded in the cash record? (f) How is it recorded on the check stub?

LABORATORY MATERIAL

Exercise No. 185

THE CRAWFORD MANUFACTURING COMPANY

TRIAL BALANCE, DECEMBER 31, 192

Cash	47,129	71		
Notes Receivable	54,513	50		
Accounts Receivable	247,249	99		
Reserve for Bad Debts			2,931	95
Raw Materials, January 1, 192	5,537	50		
Goods in Process, January 1, 192	6,527	50		
Finished Goods, January 1, 192	9,935	50		
Furniture and Fixtures	4,400			
Reserve for Dep. of Furn. and Fix			1,400	
Machinery and Equipment	150,238	50		
Reserve for Dep. of Mach. and Equip			15,023	85
Delivery Equipment	17,761	50		
Reserve for Dep. of Delivery Equipment			1,776	15
Factory Building	110,000			
Reserve for Dep. of Factory Building			8,000	
Administration Building	55,000			
Reserve for Dep. of Administration Bldg			1,000	
Factory Land	125,000			
Goodwill	180,000			
Prepaid Insurance	7,526	50		
Notes Payable			10,000	
Accounts Payable			22,183	72
Bonds Payable			100,000	
Capital Stock			400,000	
Surplus			250,129	75
Sales			649,845	86
Purchases, Raw Materials	137,106	28		
Labor	189,743	75		
Factory Expense	32,538	65		
Selling Expense	19,354	75		
Advertising	10,000			
Delivery Expense	5,117	25		
Office Expense	11,983	75		
Taxes	20,476	65		
Interest on Notes Payable	150			
Interest on Bonds Payable	15,000			
	1,462,291	28	1,462,291	28

Inventories, December 31, 192 : Raw Materials, \$7,125.76; Goods in Process, \$8,251.75; Finished Goods, \$10,872.45.

Accruals: Interest on Notes Receivable, \$1,545.60; Interest on Bonds Payable, \$800.00.

Deferred Charges: Unexpired Insurance, \$2,141.35. (Expired Insurance: Raw Materials and Goods in Process, \$194.65; Finished Goods, \$162.21; Furniture and Fixtures, \$48.67; Machinery and Equipment, \$2,189.72; Delivery Equipment, \$259.54; Factory Building, \$1,654.46; Administration Building, \$875.90.) Prepaid Interest on Notes Payable, \$25.00.

Taxes Expired: Factory Building and Land, $16,541.63; Administration Building, $3,935.02.

Depreciation: Furniture and Fixtures, 10%; Machinery and Equipment, 15%; Delivery Equipment, 20%; Factory Building, 5%; Administration Building, 4%.

Bad Debts: Reserve to be maintained at 2% of Accounts Receivable outstanding.

INSTRUCTIONS: 1. Prepare a Working Sheet. Enter the closing inventories in the debit and credit adjustment columns on the same line with the inventory accounts listed in the name of the account column. The reason for this will be explained in the next chapter in which the method of closing manufacturing accounts is discussed.

2. Prepare a Balance Sheet.

3. Prepare a Statement of Profit and Loss

Exercise No. 186

THE BOOK EXCHANGE CORPORATION

TRIAL BALANCE, DECEMBER 31, 1926

Cash	15,236	54		
Accounts Receivable	50,763	46		
Reserve for Bad Debts			1,524	85
Inventory: Rare Books, January 1, 1926	125,000			
Inventory: Regular Stock, Jan. 1, 1926	270,135	75		
Inventory: Second-hand Books, Jan. 1, 1926	67,865	80		
Furniture and Fixtures	3,792	50		
Reserve for Dep. of Furniture and Fixtures			651	10
Delivery Equipment	900			
Reserve for Dep. of Delivery Equipment			90	
Building	73,000			
Reserve for Depreciation of Building			2,000	
Land	100,000			
Goodwill	50,000			
Stationery and Supplies	2,016	50		
Store Supplies	3,100	20		
Prepaid Advertising	7,867	25		
Prepaid Insurance	10,074	15		
Notes Payable			50,750	
Accounts Payable			102,351	71
Capital Stock			180,000	
Surplus			148,695	15
Sales			513,795	50
Purchases	184,998	61		
Salaries of Sales Clerks	8,130	20		
Traveling Expenses	4,150	60		
Delivery Expense	3,536	85		
Office Salaries	6,134			
Repairs on Building	310	50		
Property Taxes	7,510	50		
Miscellaneous Expenses	3,110	50		
Interest on Notes Payable	2,224	40		
	999,858	31	999,858	31

Inventories, December 31, 1926: Rare Books, $110,000.00; Regular Stock, $117,234.50; Second-hand, $74,765.50.

Accruals: Unpaid wages of sales clerks, $318.50; accrued interest on notes payable, $631.25.

Deferred Charges: Prepaid Insurance, $5,110.50. (Expired Insurance: Books, $4,271.49; Furniture and Fixtures, $27.69; Delivery Equipment, $9.23; Building, $655.24). Prepaid Advertising, $1,050.00. Store supplies on hand, $610.50. Stationery and supplies on hand, none.

Depreciation: Furniture and Fixtures, 10%; Delivery Equipment, 20%; Building, 3%.

Bad Debts: ½% of Sales.

INSTRUCTIONS: 1. Prepare a Working Sheet.

2. Prepare a Balance Sheet.

3. Prepare a detailed Statement of Profit and Loss.

4. Prepare a brief Statement of Profit and Loss supported by a Schedule of Inventories and a Schedule of Operating Expenses.

Exercise No. 187

HOFFMAN-MANNING, INC.

TRIAL BALANCE, DECEMBER 31, 1926

Cash	8,213	21		
Notes Receivable	2,500			
Accounts Receivable	17,787	79		
Reserve for Bad Debts			932	45
Raw Materials Inventory, Jan. 1, 1926	7,136	50		
Goods in Process Inventory, Jan. 1, 1926	9,864	65		
Finished Goods Inventory, Jan. 1, 1926	3,216	45		
Trading Goods Inventory, Jan. 1, 1926	3,783	55		
Office Furniture	2,000			
Delivery Equipment	15,150	75		
Reserve for Dep. of Delivery Equipment			1,515	08
Machinery and Tools	50,275	85		
Reserve for Dep. of Machinery and Tools			8,044	14
Building	60,000			
Reserve for Depreciation of Building			7,500	
Land	20,000			
Stationery and Printing	1,123	40		
Prepaid Insurance	1,522	50		
Accounts Payable			10,216	65
Bonds Payable			40,000	
Capital Stock			100,000	
Surplus			10,843	20
Sales of Manufactured Goods			114,984	45
Mfd. Goods Sales Returns and Allowances	6,174	25		
Purchases, Raw Materials	31,185	75		
Purchases Ret. and Allow., Raw Materials			1,251	35

(*Concluded on page 692*)

HOFFMAN-MANNING, INC.

Trial Balance, December 31, 1926 (Concluded)

Labor	24,559	17		
Heat, Light and Power	3,883	65		
Repairs on Machinery and Tools	2,315	25		
Property Taxes	1,794	35		
Sales of Trading Goods			19,798	25
Trading Goods Sales Ret. and Allowances	2,141			
Purchases, Trading Goods	20,165	85		
Purchases Ret. and Allow., Trading Goods			3,125	45
Salaries of Salesmen	7,150			
Advertising Expense	2,030	50		
Delivery Expense	3,586	50		
Office Salaries	8,000			
Miscellaneous Expenses	5,125	75		
Discount on Purchases			2,475	65
	320,686	67	320,686	67

Inventories, December 31, 1926: Raw Materials, \$8,228.45; Goods in Process, \$152.50; Finished Goods, \$4,189.90; Trading Goods, \$3,273.65.

Depreciation: Office Furniture, 10%; Delivery Equipment, 20%; Machinery and Tools, 20%; Building, 5%.

Reserve for Bad Debts: 1% of Sales.

Accrued Items: Interest on Bonds Payable, \$1,250.00.

Prepaid Items: Insurance, \$209.00. (Expired Insurance: Raw Materials and Goods in Process, \$166.65; Finished Goods and Trading Goods, \$68.63; Office Furniture, \$19.61; Delivery Equipment, \$137.25; Machinery and Tools, \$411.61; Building, \$509.75). Stationery and Supplies, \$325.60.

INSTRUCTIONS: 1. Prepare a Working Sheet.

2. Prepare a Balance Sheet.

3. Prepare a detailed Statement of Profit and Loss.

4. Prepare a summarized statement supported by Schedule of Cost of Goods Sold and Schedule of Operating Expenses.

CHAPTER XLVI

FIXED AND INTANGIBLE ASSETS; LONG-TIME LIABILITIES; MANUFACTURING ACCOUNTS

Fixed Assets

An account with a fixed asset should be debited with the original cost of the asset and with the cost of any additions made to the asset. In addition to the asset account, which always shows the cost of the asset, an account should be maintained with the reserve for depreciation of the fixed asset in order to keep a record of the decrease in value which is estimated to have occurred through its approach to the end of its useful life.

The generally accepted basis of valuation of fixed assets for accounting purposes, then, is that of *cost less accrued depreciation.* The method of calculating, recording and reporting the accrued depreciation has been explained in Chapter XXXI.

Charges to Capital versus Charges to Revenue

Although the principles involved in the valuation of fixed assets seem logical enough, it is not always easy to apply these principles correctly and consistently. The difficulty in doing so arises from two main sources: (a) the difficulty of establishing a correct rate of depreciation; (b) the difficulty of distinguishing between expenditures which add to the value of the fixed assets and those which are chargeable to current expenses.

The first source of difficulty, that of determining the proper depreciation rate, is largely a matter of estimating the probable useful life of the asset. Such estimates are best made on the basis of experience with similar assets, either in the business in question or in other concerns of like nature. An adequate record of the life and performance of each unit of fixed assets used in the business will aid greatly in determining future depreciation rates and revising existing rates.

The other problem, that of distinguishing between expenditures for current expenses and those for additions to fixed assets, must be considered briefly. The problem may be divided into three parts, as follows: (1) What expenditures are properly chargeable to the original cost of the asset? (2) What expenditures are properly chargeable as additions to the value of the

asset? (3) What expenditures are properly chargeable to the expense of maintaining the asset in efficient operating condition?

All expenditures incurred up to the time the fixed asset is ready for use, may be considered a part of its cost and debited to the asset account. The following items may be considered as the original cost of a machine purchased for use in a factory:

(1) Purchase price, as indicated by purchase invoice.

(2) Freight and drayage paid for transportation from point of purchase to factory of purchaser.

(3) Cost of unpacking and setting up machine.

(4) Cost of installation, including the cost of constructing metal or concrete base.

(5) Cost of testing to determine the usefulness of machine.

(6) Cost of any changes or alterations necessary before the machine is in proper condition to operate.

After the asset is put into service, only those expenditures which add to the length of its life or increase its efficiency can be added to its value. A machine with an estimated life of four years may be overhauled, worn pieces replaced, other parts adjusted, etc., with the result that its life may be increased to five years. The cost of the overhauling to the extent of the value added through the increased life of the machine may be added to its original cost and be debited to the asset account. Expenditures added to the book value of a fixed asset are said to be *charges to capital,* since they represent additions to capital.

As an asset continues in use, some expenditures are necessary to maintain it in efficient operating condition. A building requires repairs and paint, and taxes and insurance premiums must be paid. A machine requires repairs from time to time, as well as supplies necessary for its operation, such as oil, waste, etc.; taxes and insurance premiums must also be paid. Expenditures of this type, representing as they do part of the necessary cost of using the asset for the current period, are expenses and should be charged as part of the current operating expense of the business. These expenditures are said to be *charges to revenue* since they are deducted from the revenue of the period.

Unless care is used, *capital* expenditures and *revenue* expenditures may be confused. Thus, an expenditure which, if its effects were carefully analyzed, would be found to be a necessity for the maintenance of the asset, may be considered an addition to the asset. On the other hand, a real addition to capital may be mistaken for an operating expense. The distinction between *capital* and *revenue* is an important one, since the showing of the

current profits for each period and the showing of the proprietorship from time to time depend on the correctness with which this distinction is made. Thus if expenditures made for the maintenance of a fixed asset, and properly chargeable to revenue, are charged to capital or "capitalized", not only will the assets, and consequently the proprietorship, be overstated, but the expenses for the period will be understated and the net profit overstated by that amount.

Accounts with Machinery

One of the important fixed assets of a manufacturing business is the machinery used in the manufacturing operations. For this reason, the construction of a fixed asset account and the corresponding reserve for depreciation will be illustrated by means of the Machinery account.

The purpose of the Machinery account is to show the cost of the machinery used in the manufacturing operations of the business. It should not include the cost of small tools and miscellaneous equipment. The cost of these should be recorded in a separate account or accounts. The debits and credits to the Machinery account are as follows:

MACHINERY

DEBIT:	CREDIT:
With the *cost* of machinery purchased or produced. With the cost of additions or alterations which increase the life or efficiency of the machinery.	With the *cost* of machinery and equipment sold, discarded or otherwise disposed of. The difference between the cost of the machinery and the price realized for it is debited to the Reserve for Depreciation account.

The balance of this account shows the cost of the machinery owned by the business. It is shown as a fixed asset on the Balance Sheet. If a business owns machinery of several different types, a separate account may be maintained with each major group.

The purpose of the Reserve for Depreciation of Machinery account is to show the estimated accrued depreciation on machinery. The debits and credits to this account are as follows:

RESERVE FOR DEPRECIATION OF MACHINERY

DEBIT:	CREDIT:
With the cost of any unit of machinery destroyed or discarded. With the difference between the salvage value and cost of machinery discarded. With the difference between the cost of machinery sold and the amount realized from its sale	At the close of each fiscal period, with the estimated depreciation on machinery for the period. The corresponding debit will be made to an appropriate expense account.

The balance of the Reserve for Depreciation account shows the net amount of the reserve created to provide for the decrease in value of the machinery due to depreciation. It is shown on the Balance Sheet as a deduction from the Machinery account. After the estimated depreciation for the period has been recorded, the difference between the balances of the Machinery and Reserve for Depreciation of Machinery accounts is the book value of machinery owned by the business.

Intangible Assets

Goodwill is the intangible asset of most frequent occurrence. Consequently the Goodwill account will be used to illustrate the construction of accounts with intangible assets.

The purpose of the Goodwill account is to show the value of the goodwill of a business which has been purchased by the present or preceding owners. Goodwill should be set up in the records only when it has been purchased except under extraordinary circumstances. It arises most frequently when a partnership is purchased by a corporation.

To illustrate the procedure in such a case, it may be assumed that the X Corporation purchases the business of Brown & Smith for $125,000.00. The Balance Sheet of Brown & Smith, showing totals only, is as follows:

BROWN & SMITH

BALANCE SHEET, JUNE 30, 192

Assets	176,185 60	
Liabilities	77,459 30	
Net Worth		98,726 30

Since the X Corporation is paying Brown & Smith $26,273.70 more than the net worth of their business, this difference must represent their estimate of the value of the goodwill of the business. To make the transfer of the assets and liabilities from the partnership to the corporation, it is necessary to set up the goodwill on the books of each. If it is assumed that Brown & Smith are equal partners, the goodwill will be set up on their records by the following entry:

JULY 1, 192

Goodwill	26,273 70	
Brown, Capital		13,136 85
Smith, Capital		13,136 85
To record the value of the goodwill sold to the X Corporation.		

To close the books of the partnership the following entries will be made:

JULY 1, 192

	X Corporation	202,459	30		
	Tangible Assets[1]			176,185	60
	Goodwill			26,273	70
	To transfer the assets of the partnership to the X Corporation.				
	1				
	Liabilities[1]	77,459	30		
	X Corporation			77,459	30
	To show assumption of the liabilities of the partnership by the X Corporation.				
	1				
	Cash	125,000			
	X Corporation			125,000	
	To record payment of purchase price by the X Corporation.				
	1				
	Brown, Capital	62,500			
	Smith, Capital	62,500			
	Cash			125,000	
	To show distribution of net assets to the partners.				

On the books of the corporation the assets purchased and the liabilities assumed would be recorded by the following entries:

JULY 1, 192

	Tangible Assets[1]	176,185	60		
	Goodwill	26,273	70		
	Brown & Smith, Vendors			202,459	30
	To record assets purchased from Brown & Smith.				
	1				
	Brown & Smith, Vendors	77,459	30		
	Liabilities[1]			77,459	30
	To show assumption of the liabilities of Brown & Smith.				
	1				
	Brown & Smith, Vendors	125,000			
	Cash			125,000	
	To record payment to Brown & Smith of the purchase price of their business.				

[1]The tangible assets should be listed so that the proper accounts can be closed on the partnership records and opened on the books of the corporation. They are shown here as a total for the sake of brevity. The liabilities should also be listed for the same reason.

The debits and credits to the Goodwill account are as follows:

Goodwill

Debit:	Credit:
With the cost value of the goodwill purchased.	This account is not credited unless the proprietors wish to write it off the books. In this case it is credited at the end of the fiscal period with the amount necessary to write it off during the desired period. The corresponding debit is to the Profit and Loss account.

The balance of this account shows the net value of the goodwill purchased. It is shown on the Balance Sheet under the heading of Intangible Assets, immediately following the fixed assets.

There is a difference of opinion among accountants and business men as to whether goodwill should be written off or retained on the books. In most cases, when goodwill appears on the books, it remains there permanently unless the business is sold or reorganized.

Fixed or Long-Time Liabilities

It is sometimes desirable to secure the use of funds for a longer period of time than they will be supplied by merchandise creditors or banks. These funds may be secured from additional investment by the owners or by admitting new members into the owning group, as admitting an additional partner who would contribute capital or, in the case of a corporation, by issuing additional capital stock.

In case these courses do not seem desirable, the money may be secured by long-term borrowing from outsiders. Such borrowing gives rise to long-time or *fixed* liabilities. The two fixed liabilities of most frequent occurrence are *mortgages payable* and *bonds payable*. Of recent years another fixed liability has appeared with increasing frequency on the Balance Sheets of corporations in the form of *long-term notes*. The accounts necessary to record the fixed liabilities will be discussed briefly.

Mortgages Payable

The purpose of the Mortgages Payable account is to show the amount owed on notes which are secured by a mortgage. The debits and credits to the Mortgages Payable account are given on page 699.

MORTGAGES PAYABLE

DEBIT:	CREDIT:
With payments made on mortgage notes payable. With the face value of mortgage notes payable canceled for any reason.	With the face value of the notes issued by the business which are secured by a mortgage.

The balance of the Mortgages Payable account shows the face value of notes secured by mortgage which are outstanding against the business. It is shown as a fixed liability on the Balance Sheet.

Bonds Payable

The purpose of the Bonds Payable account is to show the face value of the company's bonds outstanding. Where a company has several issues of bonds outstanding, a separate account for each issue is maintained. On the Balance Sheet of the issuing company the amount of each issue may be shown as a separate item, but more frequently only one item of bonds payable is shown, this amount representing the total of all issues outstanding.

The debits and credits to the Bonds Payable account are as follows:

BONDS PAYABLE

DEBIT:	CREDIT:
With the face value of all bonds redeemed or otherwise retired.	With the face value of bonds sold or otherwise issued.

The balance of the Bonds Payable account shows the face value of bonds outstanding. It is shown as a fixed liability on the Balance Sheet.

Long-Term Notes

Corporations often issue notes for periods which are relatively short as compared with the maturity of the average bond, but which are for a longer period than the ordinary note given to a bank or to a trade creditor. The time of these notes is usually from one to five years from the time of their issue. The purpose of selling such notes is usually to secure fixed capital at a time when the investment market is not considered favorable for an issue of long-term bonds, but at the same time there is the expectation of later issuing bonds to take the place of the notes when interest rates are more favorable to securities of long duration. These notes are very similar to bonds except in the length

of time for which they are issued, the similarity being particularly noticeable in the manner in which both are issued and marketed. They differ from mortgages in that they are not usually secured by mortgages, but, on the contrary, depend for their salability on the earning power and general credit of the company.

The accounts maintained with long-term notes are similar to the accounts maintained with any issue of bonds. The title of the account should be such as to indicate the nature of the issue.

The debits and credits to such an account are as follows:

1936 — Five-Year Seven Per Cent Gold Notes

Debit:	Credit:
With the face value of such notes redeemed or otherwise retired.	With the face value of such notes sold or otherwise issued.

The balance of such an account shows the face value of long-time notes issued and outstanding. It is shown as a fixed liability on the Balance Sheet.

Accounts Showing Cost of Goods Manufactured

In Chapter XLV the method of showing the cost of goods manufactured on the Statement of Profit and Loss was illustrated. As explained in that chapter, this cost is composed of three items: material, labor, and manufacturing expense. To obtain the amount of each of these items of cost, it is necessary to keep one or more accounts with each. It is the purpose of the following discussion to explain the construction and operation of these accounts. In this discussion it is assumed that reports are prepared and the accounts are closed monthly.

Materials Account

The first expenditure incurred in the manufacturing process is the purchase of the materials which are to be used in the product to be manufactured. It is necessary that a very careful record be kept of materials for two reasons: (a) to prevent waste or improper use, and (b) to know the cost of the materials which enter into the finished product. When materials are received, they are placed in a storeroom and, when needed in the factory, they are issued in response to a written request which is termed a "requisition." The method of storing and handling materials will be discussed in a subsequent chapter. Only the ledger record of materials will be discussed at present.

The purpose of the Materials account is to show the cost of materials on hand. The debits and credits to this account are given on page 701.

MATERIALS

DEBIT:	CREDIT:
With the cost of materials purchased. With the freight paid on materials purchased. With materials returned from the factory which have been taken from the storeroom but not used.	With the cost of materials issued from the storeroom for use in the factory. The corresponding debit is to Materials in Process. In many cases a record is kept of all materials withdrawn from the storeroom during the month and the total credited to Materials at the end of the month.

The balance of the Materials account shows the cost value of the materials on hand. It is shown on the Balance Sheet as a current asset.

Labor Account

When the raw materials are transferred from the storeroom to the factory, it is for the purpose of having work performed on them so as to convert them into the product which the business sells. For example, lumber may be transferred to the factory, and there converted into furniture. In the performance of this work labor is necessary, and the cost of this labor must be added to the cost of the materials in ascertaining the cost of the goods manufactured. The method of keeping a detailed record of labor costs will be explained in a subsequent chapter. It is sufficient for the present to know that customarily a "time ticket" is prepared for each workman showing the time he works on each job or the hours he works each day. These tickets are sent to the accounting department and the amount due to the workman calculated from them. Only the ledger account which shows the total cost of labor used will be discussed at present.

The purpose of the Labor account is to show the cost of the labor used in the manufacturing operations. The debits and credits to this account are as follows:

LABOR

DEBIT:	CREDIT:
With the cost of the services of factory employes, as shown by the time tickets.	At the end of the cost period the Labor account is credited and the Manufacturing account is debited for the labor cost of the month as shown by the debit side of the Labor account.

At the end of the period the Labor account will balance. At any time during the period it will show the labor charges to date for the current period.

Manufacturing Expense

In the operation of the factory various expenses are incurred. These expenses have been discussed and illustrated in Chapter XLV. Usually there are several accounts kept with these expenses. If the factory is divided into departments, there will be separate expense accounts for each department. The principles governing the construction and operation of all these expense accounts are the same, and the following discussion will apply to any manufacturing expense account.

The purpose of an account with manufacturing expense is to show the amount of the particular kind of expense with which the account is kept. The debits and credits to such an account are as follows:

MANUFACTURING EXPENSE

(Separate accounts for each class of expense)

DEBIT:	CREDIT:
With the total of the class of expenses with which the account is kept.	At the end of each cost period each manufacturing expense account is closed into the Manufacturing account by a debit to the latter, and a credit to the former.

At the end of the cost period each Manufacturing Expense account will balance. At any time during the period it will show the expenses which have been incurred to date during the period.

Materials in Process

In the discussion of the Materials account it has been explained that when materials are transferred to the factory they are debited to the Materials in Process account. At the end of the cost period the balance of this account, like the Labor and the Manufacturing Expense, is transferred to the Manufacturing account.

The debits and credits to the Materials in Process account are as follows:

MATERIALS IN PROCESS

DEBIT:	CREDIT:
With the cost of materials transferred from the storeroom to the factory.	At the end of the cost period, the balance of this account is transferred to the Manufacturing account by a debit to Manufacturing account and a credit to Materials in Process.

At the end of the cost period the Materials in Process account

will balance. At any time during the cost period it will show the materials which have been put into process during the period.

The Manufacturing Account

The Manufacturing account provides a summary of the factory operations for the month. The debits and credits to this account are as follows:

MANUFACTURING ACCOUNT

DEBIT:	CREDIT:
With the inventory of goods in process at beginning of the cost period. With the materials, labor and expense put in operation during the cost period as shown by the Materials in Process, Labor and Manufacturing Expense accounts	With the cost of goods completed during the cost period and transferred from the factory to the finished goods storeroom. The corresponding debit is to Finished Goods account.

The balance of the Manufacturing account shows the inventory of goods in process. It is shown as a current asset on the Balance Sheet.

Finished Goods Account

The purpose of the Finished Goods account is to show the cost value of the salable product on hand. The debits and credits to this account are as follows:

FINISHED GOODS

DEBIT:	CREDIT:
With the cost of goods manufactured and transferred to the finished goods storeroom.	With the cost of all goods sold. At the same time Cost of Sales account is debited.

The balance of this account shows the inventory of finished goods. It is shown as a current asset on the Balance Sheet.

Cost of Sales Account

The purpose of the Cost of Sales account is to show the cost of goods sold during the period. This account performs the same function as the Purchases account in a mercantile business. The debits and credits to this account are as follows:

COST OF SALES

DEBIT:	CREDIT:
With the cost of goods sold. The corresponding credit is to the Finished Goods account.	At the end of the period the balance of this account is debited to Sales or Trading, depending on the method of closing the books.

When the closing entries are made at the end of the period, the Cost of Sales account will balance. During the period it shows the cost of the goods sold to date.

Illustration of Use of Manufacturing Accounts

The operation of the manufacturing accounts discussed in this chapter may be illustrated by the following skeleton journal entries:

1. When materials are purchased:

Materials	....	
Accounts Payable..............		....

2. When materials are transferred from the storeroom to the factory:

Materials in Process	....	
Materials......................		....

3. When the wages due factory employes as shown by the time tickets are recorded:

Labor	....	
Accounts Payable..............		....

4. When manufacturing expenses are incurred:

Manufacturing Expenses	....	
Accounts Payable..............		....

5. When the ledger accounts are closed, usually monthly:

Manufacturing Account	....	
Materials in Process............		....
Labor........................		....
Manufacturing Expense........		....

6. When finished goods are transferred from the factory to the finished-goods storeroom:

Finished Goods	....	
Manufacturing Account........		....

7. When finished goods are sold, two entries are made:

a. Cost of Sales	....	
Finished Goods.............		....
b. Accounts Receivable	....	
Sales......................		....

The Cost of Sales account and the Sales account are closed at the end of the fiscal period in the same manner as the Purchases account and the Sales account of a mercantile firm.

In making the foregoing entries it has been assumed that the charges for labor and manufacturing expenses are recorded as accounts payable before they are paid. In most businesses this assumption holds true, since the one who records the charges does not record the payments. The entries for the charges and the payments are made at different times and in different records.

Trading Account

At the end of the fiscal period, certain accounts show the cost of goods purchased or produced during the period and certain other accounts show the returns from sales. To ascertain the gross profit for the period it is necessary to summarize these accounts and offset the net cost of goods sold against the net returns from sales. This may be done in two ways:

1. All the accounts affecting the cost of purchases or the cost of goods manufactured are closed into the Purchases or the Cost of Sales account. The beginning and ending inventories are also closed into this account. It then shows the cost of goods sold. All the accounts affecting the returns from sales are closed into the Sales account. The balance of the Purchases account, or the Cost of Sales account, is closed into the Sales account. The balance of the Sales account will then show the gross profit or loss on sales, and this will be closed into the Profit and Loss account.

2. A new account, termed Trading account, is set up. All accounts affecting the cost of goods sold and all accounts affecting the returns from sales are transferred to the Trading account. The balance of this account shows the gross profit or loss on sales and is transferred to the Profit and Loss account.

The debits and credits to the Trading account are as follows:

TRADING

Debit:	Credit:
With the balance of the Purchases account in a mercantile business or the balance of the Cost of Sales account in a manufacturing business.	With the balance of the Sales account.
With the balances of the Sales Returns and Sales Allowances accounts.	With the balances of the Purchases Returns and Purchases Allowances accounts.
With the inventory at the beginning of the period.	With the inventory at the end of the period.

There may, of course, be several accounts kept with each of the items with which the Trading account is debited and credited. In this case all the separate accounts are closed into the Trading account.

The balance of the Trading account shows the gross profit or loss on sales and is transferred to the Profit and Loss account.

In a business which has several accounts with Purchases, Sales and Inventory, the use of the Trading account is desirable.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

How does the management of a business ascertain the present value of a fixed asset?

— 2 —

What accounts will show this information?

— 3 —

Explain the following terms applicable to a fixed asset: (a) purchase price, (b) freight and drayage, (c) installation, (d) testing, and (e) alterations.

— 4 —

Why are the costs mentioned in the preceding question regarded as "charges to capital?"

— 5 —

Explain and illustrate the meaning of the term "charges to revenue" as applied to costs in connection with a fixed asset.

— 6 —

The Regal Manufacturing Company paid $2,000.00 to have a machine repaired. This high cost of repair was due to the necessity of having to tear down and rebuild the machine. Would this cost be a charge against capital or revenue?

— 7 —

Which of the following expenditures on a machine are charges to revenue and which are charges to capital:

a. Erecting a platform on which to set the machine.
b. Engaging an expert engineer to examine and test the efficiency of the machine.
c. Buying additional equipment for plant to carry out manufacturing process more smoothly.
d. Buying insurance for the machine.
e. Buying a patent device which increases the serviceability of the machine.
f. Certain kind of lubricating oil used to clean the machine.
g. Replacing some parts of the machine which were damaged by an accident in the factory.

— 8 —

December 31 the tangible assets of the Globe Clothing Company totaled $240,000.00, and the liabilities $60,000.00. In addition to these assets, the Goodwill account shows a balance of

$10,000.00. (a) What is the net proprietorship of the business? (b) What entry would be required to reduce the goodwill one-half? (c) What would be the net proprietorship after this entry had been made?

— 9 —

The charter of the Pure Soap Company authorizes the issue of $250,000.00 of common stock and $250,000.00 of 7% cumulative preferred stock. All of the common stock and 60% of the preferred stock has been issued. The corporation needs $100,000.00 additional working capital. State the two methods by which this can be secured.

— 10 —

If money can be borrowed at 6%, which would be the better of the two methods?

— 11 —

Explain the difference between the information shown in the Mortgages Payable and the Bonds Payable accounts.

— 12 —

Under what conditions would it be advisable for a corporation to borrow on long-term notes instead of issuing bonds?

— 13 —

What accounts contain information regarding the cost of materials, labor, and manufacturing in a manufacturing business?

— 14 —

How are these accounts shown on the Statement of Profit and Loss?

— 15 —

What information is recorded in the Materials in Process account? Illustrate your answer.

— 16 —

What information is recorded in the Manufacturing Expense account? Illustrate your answer.

— 17 —

Would a corporation manufacturing shoes only on orders received from salesmen and shipping these shoes immediately upon completion require an account with Finished Goods? Give reason for your answer.

— 18 —

"Goodwill should be set up in the records only when it has been purchased." Why is this the rule?

— 19 —

Broad & Wall are owners of a partnership whose Balance Sheet shows assets to be $795,000.00 and liabilities $245,000.00 with net worth amounting to $550,000.00. The Hamilton Production Company purchases the business of Broad & Wall for $750,000.00. Show the entries that are made in the books of the partnership.

— 20 —

State the entries necessary to record the assets and liabilities of Broad & Wall on the books of the Hamilton Production Company.

— 21 —

The Hamilton Production Company has paid for the goodwill of Broad & Wall. In reorganizing the business, the Hamilton Production Company decides that it does not want to consider among its assets this goodwill. Draw up an account for the asset "Goodwill." Show the steps that are necessary to write off goodwill from the books.

— 22 —

Compare the opportunity of a partnership and corporation for borrowing funds. What relation has this problem to accounting?

— 23 —

The following expenses have been incurred during the month:

Wages of Machine Tenders	$ 300.00
Wages of Machine Operators	2,500.00
Power	575.00
Salaries of Foremen	1,500.00
Machine Accessories	375.00

State the accounts to be charged for these expenses.

— 24 —

If a factory was destroyed by fire, would the owners collect from the insurance company the value of the labor included in the cost of goods in process destroyed by the fire? Give reasons for answer.

— 25 —

What accounts in a manufacturing business compare with the Purchases account in a mercantile business?

LABORATORY MATERIAL

Exercise No. 188

On January 1, the Brown Manufacturing Company, a newly organized corporation, has outstanding $200,000.00 common stock which has been sold for cash at par. The cash received from its sale is on deposit in the First National Bank. During the year the company performs the following transactions:

Jan. 1. Purchases for cash five lots for $500.00 each.

10. Pays $75.00 for commission to broker who purchased the lots for the company.

15. Pays $2.50 for the recording of the deed.

Feb. 1. Pays $200.00 for the construction of a sidewalk on the street bordering the lots.

Sept. 1. Pays for the construction of a building at a cost of $60,000.00. The building occupies three of the lots. It is estimated that the building will last twenty-five years and have a scrap value of $10,000.00; hence, 1/25 of $50,000.00 or $2,000.00 will be set up for depreciation each year.

Pays for machinery to be used in factory, $20,000.00. It is estimated that the machinery will last ten years and have a scrap value of $2,000.00; hence, 1/10 of $18,000.00 or $1,800.00 will be set up as depreciation each year.

During the four months beginning September 1 the company performs the following cash transactions:

(a)	Sells one of the vacant lots	$ 800.00
(b)	Pays for janitor service	415.50
(c)	Purchases raw material	29,984.65
(d)	Pays for factory wages	10,235.45
(e)	Pays for factory supplies and overhead expenses	9,764.55
(f)	Pays for general and selling expenses	8,129.45
(g)	Sells merchandise	75,981.55

Dec. 31. Closes books on this date showing results of manufacturing operations for the past four months. The buildings of the company were not completed until September 1; hence, it has been carrying on manufacturing operations only four months and depreciation is to be considered for this time. It is decided to close the books on December 31, so that future fiscal years will correspond with the calendar year.

It has no inventory on hand of raw materials nor finished goods, December 31.

INSTRUCTIONS: 1. Make (in journal form) entries (a) to open the books of the Brown Manufacturing Company as of January 1; (b) to record the transactions for the year, and (c) for the depreciation.

2. Post to the ledger accounts, allowing twelve lines for the Cash account and six lines for each of the other accounts.

3. Prepare a Trial Balance as of December 31.

4. Prepare a Balance Sheet and Statement of Profit and Loss as of December 31.

5. Make and post the journal entries to close the books.

Exercise No. 189

On January 2, the Trial Balance of the King Manufacturing Company is as follows:

KING MANUFACTURING COMPANY

TRIAL BALANCE, JANUARY 2, 192

	Cash	10,113			
	Accounts Receivable	19,651	94		
	Inventory of Finished Goods	40,234	65		
	Machinery and Equipment	60,000			
	Buildings	70,000			
	Land	30,000			
	Accounts Payable			29,783	45
	Capital Stock			150,000	
	Surplus			50,216	14
		229,999	59	229,999	59

The past two years have been very profitable and it is decided to obtain additional capital which will make possible an enlargement of the business. In pursuance of this policy, $30,000.00 of six per cent twenty-year bonds are sold at par on February 1, and $10,000.00 of seven per cent two-year notes are sold at par on March 15. The interest on each is payable annually.

On December 31 the totals shown by the books of original entry are as follows:

Sales on account, $200,110.75; raw materials purchased, $79,990.25; factory wages paid, $20,235.50; factory expenses paid, $17,765.35; general expenses paid, $12,189.75; collected on accounts receivable, $170,107.65; paid on accounts payable, $74,684.75.

Supplementary data is obtained as follows:

(a) The machinery and equipment is estimated to have a life of eight years from January 2, and to have a scrap value of $5,000.00. The depreciation is to be

distributed equally over the years during which the machinery and equipment are to be used.

(b) The buildings are estimated to have a life of twenty years from January 2, and to have a scrap value of $8,000.00. The depreciation is to be distributed equally over the years during which the buildings are to be used.

(c) The estimated loss on bad debts is one per cent of accounts receivable outstanding. The books are closed on December 31.

(d) Interest accrued on bonds payable and notes payable, $2,204.17.

INSTRUCTIONS: 1. Make journal entries (a) to open the records of the company on January 2; (b) to record the transactions for the year, and (c) for the adjustments at the close of the year.

2. Post journal entries, allowing six lines for each ledger account.

3. Prepare a Trial Balance.

Exercise No. 190

The Trial Balance of the Hydrex Corporation on January 2, is as follows:

HYDREX CORPORATION

TRIAL BALANCE, JANUARY 2, 192

Cash	10,256	29		
Accounts Receivable	29,743	71		
Raw Materials	5,174	65		
Goods in Process	7,825	35		
Finished Goods	4,173	50		
Machinery and Equipment	19,826	50		
Buildings	9,000			
Land	6,000			
Accounts Payable			21,773	25
Capital Stock			60,000	
Surplus			10,226	75
	92,000		92,000	

The operations of the corporation during the month of January are as follows:

(a)	Raw materials purchased on account....	$10,113.45
(b)	Raw materials transferred from storeroom to factory..................	8,887.35
(c)	Labor used in factory as shown by time cards..........................	4,239.50
(d)	Manufacturing supplies purchased on account, all of which have been used....	2,134.25
(e)	Cost of repairs on machinery and equipment as shown by cost sheets........	1,115.45

(f)	Other manufacturing expenses such as light, power, etc., as shown by statements received	462.35
(g)	Cost of finished goods transferred from factory to finished goods storeroom	17,672.55
(h)	Selling and general expenses as recorded from invoices and payrolls	2,879.70
(i)	Sales on account	28,143.34
(j)	Cost of goods sold	20,115.45
(k)	Accounts receivable collected	35,134.56
(l)	Accounts payable paid	25,987.67

Supplementary Data: Depreciation on machinery and equipment is allowed at the rate of twenty per cent a year and on the buildings at the rate of five per cent a year.

Estimated loss on bad debts is one-tenth of one per cent of accounts receivable outstanding.

INSTRUCTIONS: 1. Open, by means of a compound journal entry, the accounts necessary to show the Trial Balance at the beginning of the year.

2. Make journal entries necessary to record the transactions for the month.

3. Post the entries (allow eight lines for Accounts Payable account and five lines for each of the other accounts), and take a Trial Balance.

4. Make adjusting entries and post.

5. Prepare a Balance Sheet and a Statement of Profit and Loss.

6. Make and post the closing entries.

CHAPTER XLVII

RECORDS OF ORIGINAL ENTRY

The Voucher System of Recording Purchases

In the operation of either a mercantile or manufacturing business, it is necessary to purchase the following:

(1) *Goods or Materials.* In a mercantile business, goods are purchased and resold without modification. In a manufacturing business, materials are purchased and used in the production of the commodity or service which the business sells.

(2) *Assets for use in business.* Both mercantile and manufacturing businesses must purchase such assets as furniture and fixtures, land, buildings, machinery and equipment with which to carry on their operations.

(3) *Services.* All businesses must purchase services such as labor, heat, light and power with which to operate. Such services are ordinarily termed *expenses.* They may be used in the production of the commodity or service the business sells, or they may be used in selling the product after it is produced or purchased.

The volume of operations performed by even the small business is such that the combined expenditures for these purposes is of sufficient amount to be of importance. In a large business, such expenditures must of necessity amount to enormous sums. In both the small and large business, it is necessary that some effective control be exercised over these expenditures. In a small business, this is usually accomplished by having all purchases made under the direct supervision of the chief executive of the business. In a large business, such supervision is not practicable. It is necessary to delegate the responsibility for the incurring of such expenditures to subordinates, and these are at best only supervised indirectly by the chief executive of the business. It is necessary, therefore, to devise some means by which a proper control of expenditures may be effected, since the personal control of the chief executive is no longer possible.

One method of securing such control is to require for each expenditure a written authorization. This authorization is usually in the form of a *voucher*, which is approved by the proper authorities. The voucher is prepared from the invoice or other

data which serve as evidence of the expenditure to be made. The front of the voucher provides a place for making an explanation of the expenditure and for the signatures of those approving the expenditure. The back of the voucher provides a space for indicating the accounts which are to be charged for the expenditure. The front and back of a voucher are shown in Illustrations Nos. 107 and 108.

Where the voucher system is in use, every invoice or bill received must be "vouchered." This necessitates that it be approved as to:

1. Quantities, prices, grades, sizes, and quality, by the purchasing agent.
2. Actual receipt, by the receiving clerk.
3. Mathematical accuracy of extensions, by checking clerk in accounting department.
4. Terms of payment, by purchasing agent.
5. Distribution (accounts to be charged), by bookkeeper or auditor.

VOUCHER

SUPERIOR ICE CREAM COMPANY

No. 42 Date of Issue Aug. 1 19... Date Due ...19... Less...%

In Account with Pay Roll

Address ... for the following:

Invoice Date	DESCRIPTION	Amount	
	Pay roll for week ending August 1, as per pay roll book	1566	25

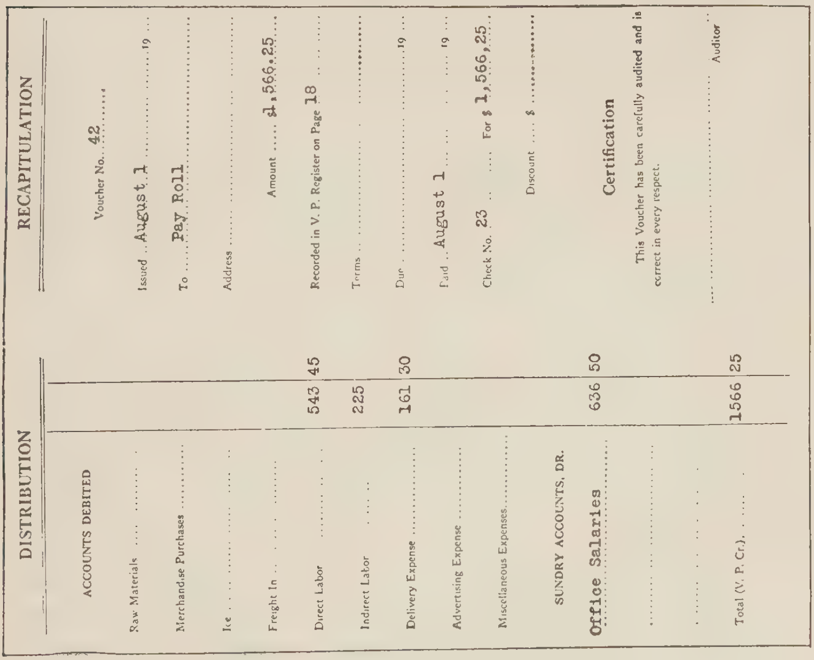
Geo. Rooney President ... Superintendent T. R. March Bookkeeper

Signatures indicate the following: PRESIDENT, that the company has received full benefit and payment may be made when due; SUPERINTENDENT, that the prices, terms, and amount are correct; Bookkeeper, that the voucher is a true copy of the original papers and the facts are stated correctly.

Illustration No. 107, Front of Voucher

Usually these approvals are indicated on the invoice before the voucher is prepared. The voucher shows the distribution or the accounts to be charged. The bookkeeper or auditor usually indicates the distribution on the invoice before it is copied on the voucher so as to prevent mistakes. If the accounts in the ledger are numbered, the bookkeeper will indicate the charges by means of these numbers. After the voucher is prepared, the invoice is fastened on the inside and the voucher is folded, so that the distribution, as shown on the back, will be visible. It is then entered in the appropriate record as explained in the following paragraphs, and filed in the "Unpaid Vouchers" file under the date when it is to be paid. When the due date arrives, the voucher is taken from the file and a check issued in payment. The check is recorded in the cash disbursements record. After the voucher is paid, it is filed in the "Paid Vouchers" file. Vouchers authorizing the payment of cash at the time the voucher is issued are filed in the "Paid Vouchers" file after the voucher is recorded in the voucher register and the payment in the cash disbursements journal.

Occasionally business firms mail the voucher with the check to the creditor with the request that he sign the voucher acknowl-



RECAPITULATION

Voucher No. 42

Issued August 1 19

To Pay Roll

Address

Amount $1,566.25

Recorded in V. P. Register on Page 18

Terms

Due 19

Paid August 1 19

Check No. 23 For $ 1,566.25

Discount $

Certification

This Voucher has been carefully audited and is correct in every respect.

Auditor

DISTRIBUTION

ACCOUNTS DEBITED		
Raw Materials		
Merchandise Purchases		
Ice		
Freight In		
Direct Labor	543	45
Indirect Labor	225	
Delivery Expense	161	30
Advertising Expense		
Miscellaneous Expenses		
SUNDRY ACCOUNTS, DR.		
Office Salaries	636	50
Total (V. P. Cr.)	1566	25

Illustration No. 108, Back of Voucher

Voucher Register

Date		Voucher No	Name	Address	For	When & How Paid Date	Ck No	Vouchers Payable Cr.	
Aug	1	42	Pay Roll		Pay Roll to date	Aug 1	23	1566	25
	3	43	Arctic Ice Co.	192 First St. City	Inv 8-3			22	50
	6	44	Moss & Lane	36 Sycamore St., City	Inv 8-5	Aug 18	32	110	20
	5	45	American Printing Co.	1 [illegible] South St. City	Inv 8-1	8	26	65	50
	11	46	National Supply Co	411 Harrison Ave. City	Inv 8-9			17	52
	31	87	C B & Q R R Co	City	Freight bill 8-31	Aug 31	40	12	60
	31	88	Petty Cash		Fund renewed	31	41	20	
	31	89	South Side Ice Co	310 Jefferson Ave. City	Inv 8-29			17	54
								4846	16

Illustration No. 109, Voucher Register, Left Page

edging its payment and return it to the sender. This practice is not employed to any considerable extent at present. It has been unsatisfactory for two reasons: (a) creditors forget to receipt and return the voucher, and hence the substantiating vouchers for the entries in the records are missing; (b) the distribution and other details on the voucher may give information to outsiders which it may be undesirable for them to have.

The Voucher Register

It has been explained in the preceding paragraphs that when a voucher system of authorizing payments is used, a voucher is prepared for each expenditure made, whether the expenditure be for goods, materials, fixed assets, or services. In fact, under the voucher system, a check is never issued except in payment of a properly authorized voucher.

When this method of controlling expenditures is employed, it is most convenient to record all purchases in one record. This may be done by employing what is known as a *voucher register*. The voucher register contains a record of all vouchers issued. As soon as a voucher is prepared and approved, it is entered in the voucher register. When it is paid, the date of payment is entered in the appropriate column in the register. The total of the unpaid vouchers as shown by the voucher register must at all times agree with the total of the vouchers in the "Unpaid Vouchers" file.

The form of the voucher register may vary widely depending largely on the size of the business and the number of accounts maintained with purchases and expenses. It is usually ruled to provide columns showing date of entry, voucher number, name of creditor, date paid, number of check issued in payment, a

Voucher Register

Raw Materials Dr	Mdse Purchases Dr	Ice Dr	Direct Labor Dr	Indirect Labor Dr	Delivery Expense Dr	Advertising Expense Dr	Misc Expenses Dr	Sundry Accounts Dr Amount	Name of Account	L.F.
			543 40	225	161 30			636 50	Office Salaries	18
		22 50								
	110 20									
						20 50	45			
876	876									
								12 60	Freight In	10
2 50		4			6 50		7			
		17 54								
5725 35	1233 43	101 80	456 05	450 28	186 48	120 40	1017 90	18375 47		

Illustration No. 109, Voucher Register, Right Page

"Vouchers Payable Credit" column, and as many debit columns as are necessary to show the distribution and classification of all bills and invoices. To the extreme right, a space should be provided for sundry debits, with columns for the name of the account, the ledger folio, the amount, and remarks. Every entry made in this record thus appears as a credit to Vouchers Payable and as a debit to the account or accounts charged for the commodities or services represented by the invoice.

The voucher register is not posted until the end of the month. At this time all the columns are totaled and the total of each column posted to the account stated at the head of the column. The total of the "Vouchers Payable" column is posted to the *credit* of the Vouchers Payable account, while the totals of all the other columns are posted to the *debit* of their respective accounts. The items in the "Sundry" column are posted individually to the *debit* of the account stated in the "Name of Account" column.

The voucher register should be proved before posting. The sum of the totals of all the debit columns should be the same as the total of the "Vouchers Payable" column. Unless there is agreement, an error has been made either in making the distribution or in obtaining the various totals, and this error must be found before posting.

A form of voucher register is shown in Illustration No. 109.

Relation of the Voucher System to the Accounts Payable Ledger

When the voucher system is employed, the accounts payable ledger is ordinarily not used. The vouchers in the "Unpaid Vouchers" file serve as a record of the amount owed individual creditors, and since they are filed under the due date, they auto-

matically provide for payments to creditors. The vouchers in the "Unpaid Voucher" file must agree at all times with the unpaid vouchers as shown by the register, and the total of these vouchers must agree with the balance of the Vouchers Payable account.

Card Record of Vouchers Payable

In a business where it is necessary to have numerous materials and expense accounts, it is not possible to use a voucher register in the form of Illustration No. 109, because too many columns are required. In such cases, cards are used on which to make the voucher distribution. A separate card is used for each account. All the charges to each account are entered on the card kept with the account. The total of the daily charges to all the accounts debited is entered on a Vouchers Payable card, so that the credit to Vouchers Payable may be readily ascertained. At the end of the month, the total of the entries on each card is posted to the appropriate account. In most large companies, it is necessary to use the separate cards as a means of showing the voucher distribution. These cards are filed in trays in alphabetical order. Frequently posting machines are used in making entries to them.

Voucher Distribution

Account No.....82.....

Account Name..Raw Materials........

Date	Number	Amount		Posting Folio
Aug. 12	9	152		
12	10	920		
16	15	750		
17	16	66	80	

Illustration No. 110,
Voucher Distribution

No particular form is necessary for the cards used for the voucher distribution. A form frequently used is ruled as in Illustration No. 110.

The Cash Records

Entries in the voucher register result in debits to various asset, trading, and expense accounts, and a credit to the Vouchers Payable account equal to the total of these debits. The Vouchers Payable account serves the same purpose as the Accounts Payable account, since it shows the total amount due to creditors. When the individual vouchers are paid, an entry is made in the cash disbursements journal which results in a debit to Vouchers Payable and a credit to Cash or to the Bank account, if the latter account is kept in place of Cash.

If the terms of the invoice provide for discount, the amount of the discount is entered in the "Purchases Discount" column

on the same line with the entry for the voucher. The amount of the check issued in payment for each voucher is entered in the column provided for the bank on which the check is drawn. The total of the first column is posted to the debit of the Vouchers Payable account; the total of the second column, to the credit of the Purchases Discount account; and the totals of the "Bank" columns, to the credit of the proper Bank accounts.

The cash disbursements record is not posted until the end of the month, when the totals of the columns are posted to the accounts indicated. The individual items in the cash disbursements record are not posted. Under this procedure, the cash disbursements record becomes merely a "check register" which registers each check issued. In form it may be as in Illustration No. 111.

Cash Disbursements August

Date	Name of Payee	Check No	Vouchers Payable Dr	Purchases Discount Cr	First Nat'l Bank Cr	Farmers Trust Co Cr
1	Pay Roll	23	1566 25			1566 25
2	Johnson Dairy Co	28	196 30		196 30	
	Altman & Co	24	60	1 80		58 20
7	Empire Furniture Co	19	115 68		115 68	
8	City Service Co	25	187 50			187 50
8	American Printing Co	26	65 50			65 50
31	Greenwood & Son	36	250 40	7 51		242 89
31	Petty Cash	41	20		20	
31	South Side Ice Co	42	81 50		81 50	
			(6) 45456 26	(9) 13 01	(1) 21403 78	(1) 24033 97

Illustration No. 111, Cash Disbursements Journal

When the voucher register is used, the cash receipts journal and the cash disbursements journal are ordinarily kept as two separate records. In fact, this procedure is usually followed in all companies of any considerable size, since the record of cash receipts and the record of cash disbursements are made by different persons. For example, the cashier may prepare the record of cash receipts, while the accounts payable section of the accounting department may prepare the record of cash disbursements.

The form of the cash receipts record will depend on the analysis of cash receipts desired. The cash receipts journal in Illustration No. 112 contains a column for the subsidiary ledger, a column for department sales, a column for the general ledger, and columns for two banks. Cash receipts from customers on account are

entered in the first column; department cash sales, in the second column; and cash receipts affecting general ledger accounts, in the third column. When a deposit is made, the amount is entered in the proper bank column.

At the end of the month, the total of the first column is posted to the Accounts Receivable account in the general ledger; the total of the second column, to the department sales account as indicated by the name of the column. The total of the third column is not posted because the entries in this column are general ledger items which are posted individually. The totals of the "Bank" columns are posted to the debit of the Bank accounts in the general ledger. When all cash received is deposited, these two Bank accounts represent the cash receipts.

Cash Receipts - August

Date	LF	Account Credited	Explanation	Account Receivable Cr	Ice Cream Sales Cr.	General Cr	First Nat'l Bank Dr	Farmers Trust Co Dr
1		Ice Cream Sales	Cash sales		247 50		247 50	
2	29	North Side Boat Club	On account	116 10				
2	30	Excelsior Candy Co	In full of account	105 50				
3	28	Star Cafeteria	" " "	292 75				
2	26	Lakeside Park Co	On account	358				
2	27	Messner & Messner	" "	900			292 75	1479 60
"	7	Unissued Cap Stock Pref	5 shares sold at par			500		500
30	31	Castle Hotel	On account	22				
30	8	Ice Cream Sales	Cash sales		123 50		145 50	
				7040 55	1421 0	13644 [illegible]	15130 92	[illegible] 65

Illustration No. 112, Cash Receipts Journal

Sometimes a *voucher check* is used when the voucher method is employed. A voucher check is one which shows the items for which the check is issued in payment. When it is endorsed by the payee and passed through the bank, it becomes a receipt for the items shown on the check. The items for which the check is issued may be shown on the face of the check in space provided at the left-hand end, or they may be shown on the back of the check. Occasionally, a voucher blank of the same size as the check is attached to the check. In this case the voucher blank and the check are folded so that the details are inside and the endorsement can be placed on the back of the voucher blank.

The Sales Record

In a large business, where sales are numerous, it is not practical to make an entry in a sales record for each sale made. Usually a copy of the sales invoice is made and this is used as a basis of

the sales record. Sometimes the copy of the sales invoice is filed in a loose-leaf binder, and at the end of the month the total of all the invoices is obtained and posted to the Accounts Receivable and Sales accounts. The charges to the customers' accounts are made from the separate invoices. If an analysis of the sales is desired to show the sales of different commodities, this analysis can be made from the copy of the sales invoice. One method of making this analysis is to classify the sales as shown by the invoices by the use of columnar paper. If several classifications are to be made, it is desirable to use tabulating machines to make the analysis. The use of such machines will be explained in a subsequent chapter. In any case the copy of the sales invoice serves as the basis:

1. For posting to the individual customers' account.
2. For posting to the general ledger.
3. For making any analysis desired.

Sales Journal August

Date	L F	Account Debited	Explanation	Accounts Receivable Dr	Ice Cream Sales Cr	Mdse Sales Cr	Ice Cr
1	31	College Inn	311 University Ave City	6.50	16.50		
1	22	S M Black	Maryville	87.75	70	13.75	4
2	33	Morris & Morris	225 Burnet Ave, City	63.75	57.50	6.25	
2	29	Jenkins Brothers	Maryville	367.50	360		7.50
7	28	Star Cafeteria	400 E Fifth St City	28	22.50	5.50	
31	32	Morgans	426 W 4th St, City	24	24		
31	30	Scott & Lanning	Clinton	364.85	345	14.85	5
31	26	S M Black	Maryville	195	195		
				(2) 13023.11	(8) 12823.75	(8) 156.36	(12) 43

Illustration No. 113, Sales Journal

Notes Receivable and Notes Payable Journals

If the notes received by a business from its customers are not too numerous, they may be recorded in the general journal and posted individually to the debit of Notes Receivable. If numerous notes are received, it is usually expedient to have a separate "Notes Receivable" column in the journal, the total of which is posted to the debit of Notes Receivable. If the number of notes received is very large, it is expedient to have a separate notes receivable journal in which to record them. This journal will serve as a posting medium, hence it is unnecessary to make any record of such notes other than in the notes receivable journal. The form of such a record is shown in Illustration No. 114.

Notes Receivable

Date Rec'd	Our No.	L. F.	FROM WHOM RECEIVED (Account Credited)	Face of Paper Notes Rec Dr.	INTEREST EARNED Dr.	INTEREST EARNED Cr.	Accts Rec. Cr.	Gen'l Ledger Cr.	MAKER (Note) DRAWEE (Draft)
Aug 2	6	26	J. M. Black	151 76			151 76		Miller & Barr
15	7	27	Meisner & Meisner	250		1 25	248 75		Meisner & Meisner
18	8	32	Cooper & Cooper	287 11	81		287 92		J. B. Macklin
24	9	19	George Rooney—Sub to Com Stock	2500				2500	George Rooney
				3188 87	81	1 25	688 43	2500	

Illustration No. 114, Notes Receivable Journal, Left Page

Notes Receivable

DATE OF PAPER Year	Month	Day	Time to Run	Rate of Int.	WHEN DUE Year	Jan. (1)	Feb. (2)	Mar. (3)	April (4)	May (5)	June (6)	July (7)	Aug. (8)	Sept. (9)	Oct. (10)	Nov. (11)	Dec. (12)	WHERE PAYABLE	REMARKS
192	Aug	2	30 da		192									1				Citizens Bank Canton	Paid Aug 31
192		13	30 "		192									12				Second National Bank	
192	July	31	60 "		192									29				City National Bank	
192	Aug	24	60 "	6%	192										23			Second National Bank	

Illustration No. 114, Notes Receivable Journal, Right Page

The method of handling notes receivable outlined in the preceding paragraph applies equally well to the method of handling notes payable by the use of a special journal. The form of a notes payable journal is shown in Illustration No. 115.

Notes Payable

Date	Our No.	L. F.	IN WHOSE FAVOR (Account Debited)	Face of Paper Notes Pay Cr.	INTEREST COST Dr.	INTEREST COST Cr.	Accts Pay Dr.	Gen'l Ledger Dr.	MAKER (Note) DRAWEE (Draft)
Aug 21		30	Citizens Motor Car Co	167 25	84		166 41		Ourselves
5	22	31	Lake View Dairy Co	803 48			803 48		"
21	23	29	Farmers Trust Co	5000	75			49 25	"
29	24	34	Arctic Ice Co	2000			2000		"
				7970 73	1 59				

Illustration No. 115, Notes Payable Journal, Left Page

Notes Payable

DATE OF PAPER Year	Month	Day	Time to Run	Rate of Int.	WHEN DUE Year	Jan. (1)	Feb. (2)	Mar. (3)	April (4)	May (5)	June (6)	July (7)	Aug. (8)	Sept. (9)	Oct. (10)	Nov. (11)	Dec. (12)	WHERE PAYABLE	REMARKS
192	Aug	14	30 da		192									13				First National Bank	
192		15	60 da		192										14				
192		22	60 da		192										21			Farmers Trust Co	
192		29	30 da		192									28				First Natl Bank	

Illustration No. 115, Notes Payable Journal, Right Page

QUESTIONS FOR CLASS DISCUSSION

— 1 —

"In both the small and the large business, it is necessary that some effective control be exercised over the expenditures for purchases of materials, assets, and services." Give reasons why this control is necessary.

— 2 —

Compare the methods of control over expenditures in a large and in a small business.

— 3 —

Explain the relation of the voucher files to the voucher register.

— 4 —

Is the voucher mailed to the vendor with the check in payment for the amount due as shown by the voucher? Give reasons for your answer.

— 5 —

(a) What information is contained in the voucher register that will not be contained in the purchases journal? (b) When a voucher register is used, would you maintain a purchases journal also? Why?

— 6 —

Describe the method of posting from the voucher register to the various accounts.

— 7 —

In examining the voucher register of the Ferro Construction Company, it is found that the total of the debit columns is larger than the total of the "Vouchers Payable" column. Can you give any reason for this difference in amounts?

— 8 —

(a) Explain the relation of the voucher register to the cash records. (b) From the point of view of reducing accounting entries, what advantage is there in using vouchers?

— 9 —

When a voucher is issued for each purchase of material, assets, or services, is it necessary to maintain an account with each vendor? Give reasons for your answer.

— 10 —

The Vouchers Payable account in the general ledger of the Anderson Mercantile Company is as follows:

VOUCHERS PAYABLE

192 Dec.	31		C 11	172,500	192 Dec.	31		V 9	202,600

What information does this account show?

— 11 —

How could the information recorded in the account in Question 10 be verified?

— 12 —

How will the information given in the account in Question 10 be shown on the Balance Sheet?

— 13 —

From what you know of business organization, how do you account for the separation of the cash receipts journal and cash disbursements journal, and for their control by two different officials?

— 14 —

Compare the methods you would use for entries with reference to sales in a business of 1,000 annual sales and a business of 50,000 annual sales.

— 15 —

May 1, Jenkins Brothers received a 6% interest-bearing note for $500.00, dated April 1, from C. H. Davenport, a customer, to apply on account at its present value. What entry will be required in the general journal for this note?

— 16 —

(a) If the notes receivable book is ruled for the information necessary in posting, how would the note referred to in the preceding question be recorded therein? (b) How would it be posted?

LABORATORY MATERIAL

Exercise No. 191

Vouchers were issued by the American Manufacturing Company during the month of July as follows:

1. Telephone service for the month, $10.00.
2. Purchased from Johnson Printing Company, on account, office supplies, $25.00; advertising material, $36.50.
5. Purchases as follows:
   Davis Brothers, terms account, raw materials, $421.50; merchandise, $210.00.
   Day & Brown, terms 3/10, n/30, raw materials, $650.00; merchandise, $150.00.
7. Payroll: labor, $750.00; foremen and superintendent, $150.00; office employes, $100.00; employes in the sales department, $150.00.
12. Purchased from the Dietz Desk Company on account an office desk and chair, $125.00.
13. Renewed the petty cash fund of $50.00; previous charges: selling expenses, $21.00; freight and expenses in, $6.50; delivery expenses, $2.50; stamps and other office expenses, $12.50; purchases expenses, $4.00. The amount of the vouchers is sufficient to bring the fund up to $50.00.
14. Payroll: labor, $750.00; foremen and superintendent, $150.00; office employees, $100.00; employes in the sales department, $150.00.
17. Purchases as follows:
   W. B. Lockett & Company, terms 3/10, n/30, merchandise, $610.50; raw materials, $205.50.
   Allen Brothers, terms 2/10, n/30, raw materials, $1,650.00.
19. Central Machine Company, repairs on machine, $148.50. Debit Manufacturing Expense.
21. Payroll: labor, $750.00; foremen and superintendent, $150.00; office employes, $100.00; employes in the sales department, $150.00.
25. Purchased from Atkinson & Son on account, raw materials, $125.50; merchandise, $67.75.
28. Payroll: labor, $750.00; foremen and superintendent, $150.00; office employes, $100.00; employes in the sales department, $150.00.
31. Gave Central Realty Company a check for $250.00 rent.

INSTRUCTIONS: 1. Rule a voucher register containing columns for Vouchers Payable, Raw Materials, Merchandise, Labor, Manufacturing

Expense, General Expense, Selling Expense and Sundry Accounts, and record the above vouchers in this register.

2. Make the entries in the cash disbursements journal, assuming that checks have been issued for all vouchers, except purchases on account. The cash disbursements journal should have a column for Vouchers Payable, Purchases Discount and Citizens National Bank.

3. Post the entries affecting the general ledger accounts including the totals; allow four lines for each account.

4. Take a Trial Balance.

Exercise No. 192

Vouchers were issued for the following transactions of the Franklin Printing Company during the month of November:

2. Bay State Paper Company, paper to be placed in stock, terms 2/10, n/30, $327.50.

   United States Envelope Company, envelopes to be placed in stock, terms 1/10, n/30, $65.70.

3. Simmonds McMullen & Company, insurance on plant and machinery, $300.00 cash.

4. Pennsylvania Oil Company, factory supplies, $3.50 cash.

   Bradford Belting Company, repairs on belt on linotype machine (composing room expense), $3.80 cash.

8. Whitaker Paper Company, Tympan Paper for use on the cylinder press (press room expense), on account, $28.50.

   Payroll, $605.00: labor, $348.00; foreman in the press room, $50.00; foreman in the bindery, $50.00; foreman in the composing room, $50.00; selling expense, $25.00; general expense, $82.00.

11. E. C. Fuller Company, factory supplies, $14.60 cash.

13. Diamond Machine Company, $32.50 cash; repairs on machines in press room, $8.25; composing room, $6.20; bindery, $18.05. These are expenses of the three departments.

15. Payroll, $605.00: labor, $348.00; foreman in the press room, $50.00; foreman in the bindery, $50.00; foreman in the composing room, $50.00; selling expense, $25.00; general expense, $82.00.

    Renewed the petty cash fund, $19.60. Charges for previous expenditures as follows: press room, 60 cents; bindery, $1.00; selling expense, $7.00; general expense, $6.00; advertising, $5.00.

19. Dearborn Paper Company, on account, paper to be placed in stock, $221.50.

22. Payroll, $605.00: labor, $348.00; foreman in the press room, $50.00; foreman in the bindery, $50.00; foreman in the composing room, $50.00; selling expense, $25.00; general expense, $82.00.

24. Citizens' Telephone Company, telephone service, $4.50.
29. Payroll, $605.00: labor, $348.00; foreman in the press room, $50.00; foreman in the bindery, $50.00; foreman in the composing room, $50.00; selling expense, $25.00; general expense, $82.00.
30. Armstrong Realty Company, rent, $200.00; charge one-fourth to general expense and the other three-fourths equally between the press room, composing room and bindery.

Underwood Typewriter Company, typewriter, $100.00.

INSTRUCTIONS: 1. Rule a voucher register with columns for Vouchers Payable, Materials, Labor, Press Room Expense, Composing Room Expense, Bindery Expense, Selling Expense, General Expense and Sundry Accounts, and record the above transactions in the order given.

2. Make the entries in the cash disbursements journal, assuming that checks had been issued for all vouchers, except purchases on account. The cash disbursements journal should have columns for Vouchers Payable, Purchases Discount and American National Bank.

3. Post the entries affecting the general ledger accounts, including the totals, allowing four lines for each account.

4. Take a Trial Balance.

Exercise No. 193

The following transactions affecting the Notes Receivable and Notes Payable accounts were performed by the D. C. Carpenter Company during the month of October:

5. Received from Smith Brothers to apply on account, note for $250.00 dated today, due in 60 days. Gave them credit for the face of the note less interest at 6% from October 5 to maturity.
6. Borrowed $5,000.00 from the First National Bank on firm's 30-day note dated today with interest at 6%. Received credit for the face of the note.
7. Received from Rice & May to apply on account, note for $650.00. This note was signed by N. L. Roberts made payable to Rice & May and endorsed by them. It is dated September 2, due in 90 days with interest at 6%. Gave them credit for the face of the note plus interest to date.
10. Accepted Higley Brothers 10-day draft for $1,000.00 dated October 9, to apply on account.
15. Gave the Citizens' Motor Car Company two notes for $500.00 each dated today, due in 30 and 60 days respectively, with interest at 6% from date, as part payment of a motor truck to be used in the delivery department.
18. Received from Simpson Brothers, to apply on account, their 60-day note for $650.00, signed by G. W. Welsh, and made payable to Simpson Brothers and endorsed by them. It is dated September 18, with interest at 6% from

date. Gave them credit for the face of the note plus interest to date.

25. Gave C. A. Arnold & Son our note dated today, due in 60 days for $1,010.00 in payment of account of $1,000.00 and interest on the account for 60 days, $10.00.

27. Received from Robert E. Menz, two notes in full of account, one for $500.00 dated today and due in 60 days, and the other for $365.75 dated today and due in 90 days, each with interest at 6% from date.

INSTRUCTIONS: 1. Prepare a notes receivable and a notes payable journal similar to Illustrations Nos. 114 and 115, and record the above transactions.

2. Post the entries affecting the general ledger accounts, including the totals, allowing four lines for each account.

3. Take a Trial Balance.

Exercise No. 194

The cash receipts for the Robert McFarland Company for the month of July were as follows:

9. Received a check from Richards for $123.54, in payment for account, less $3.82 discount.

   Enter the amount of the check, plus the discount, in the "Accounts Receivable" column, and the discount in the "Sales Discount" column on the same line.

10. Cash sales, $382.50.

12. Received notice from the First National Bank that note for $689.37 has been collected, and the amount of the note, with $10.34 interest, has been placed to the credit of the firm.

13. Received check from Albert Bell & Son for $86.75 in full of account.

15. Cash sales, $631.83.

15. Deposited the cash receipts to date ($1,224.62) in the First National Bank.

20. Received check from Miller Brothers for $400.00 in payment for note due today.

25. Received checks from customers as follows:
    L. A. Arnold, $229.54; discount, $4.68.
    General Mercantile Company, $150.00; discount, $4.64.
    S. A. Watters, $214.32; discount, $6.63.

28. Cash sales, $407.16.

31. Deposited all cash received to date ($1,401.02) in the First National Bank.

INSTRUCTIONS: 1. Rule a cash receipts journal with columns for General Ledger, Accounts Receivable, Sales Discount, Cash Sales and First National Bank, and record the above transactions.

2. Post the entries affecting the general ledger accounts, including the totals. An account is kept in the general ledger with First National Bank.

3. Take a Trial Balance.

CHAPTER XLVIII

APPLICATION OF THE PRINCIPLES—A PRACTICE SET

Purpose of Chapter

The purpose of this chapter is to provide material which will illustrate and require the application of principles discussed in the preceding chapters. Its specific purpose is as follows:

1. To provide practice in the use of the accounts and records peculiar to a corporation.
2. To provide practice in the operation of the major accounts of a manufacturing business.
3. To provide further practice in the preparation of accounting records, accounts, and reports.

Details are eliminated as much as possible, routine transactions are reduced to a minimum, and the transactions are selected so as to illustrate the important principles with reference to corporation and manufacturing accounts. Clerical work is eliminated in every way possible so that the student may be left free to concentrate on the principles involved.

Description of Practice Set

This set represents a manufacturing business conducted by a corporation. In order to make the manufacturing transactions as simple as possible, it was deemed advisable to select a business producing only one commodity, of which the production process is short and simple. For this reason, an ice cream manufacturing business was chosen. The transactions given in the set were adapted from the records of a manufacturing business. Changes were made to reduce the number of the routine transactions and to increase the number of the strictly corporation transactions. The transactions given, however, are representative of those of the business from which the data for this set was obtained.

Although this set is based on the records of a business manufacturing ice cream, it is not its primary purpose to illustrate the accounting for such a business; rather, this business was chosen because the transactions performed by it were thought suitable to illustrate in a simple manner the principles of manufacturing and corporation accounting of primary importance, which are applicable to any line of business.

The transactions cover a period of two months. At the end of the first month the student takes a Trial Balance and prepares the financial reports, but does not close the ledger. At the end of the second month a Trial Balance is taken, a Balance Sheet and a Statement of Profit and Loss prepared, and the ledger closed.

Accounts Used

Before making any entries, the student should familiarize himself with the general ledger accounts given below.

First National Bank (4)
Farmers Trust Company (4)
Petty Cash (4)
Notes Receivable (4)
Accounts Receivable (9)
Reserve for Bad Debts (4)
Accrued Accounts Receivable (4)
Inventory of Finished Goods (4)
Inventory of Merchandise (4)
Inventory of Raw Material (4)
Subscriptions Receivable—Common Stock (16)
Subscriptions Receivable—Preferred Stock (11)
Prepaid Insurance (4)
Office Supplies (9)
Sales Dept. Supplies (6)
Advertising Supplies (5)
Ice (12)
Factory Supplies (6)
Office Equipment (6)
Reserve for Depreciation of Office Equipment (4)
Delivery Equipment (4)
Reserve for Depreciation of Delivery Equipment (4)
Machinery and Factory Equipment (4)
Reserve for Dep. of Machinery and Factory Equipment (4)
Buildings (4)
Reserve for Dep. of Buildings (4)
Land (4)
Goodwill (4)
Parker & Thompson, Vendors (11)
Accounts Payable (6)
Notes Payable (5)
Vouchers Payable (9)
Accrued Accounts Payable (5)
Dividends Payable, Preferred Stock (4)
Mortgage Payable (4
Capital Stock—Common (4)
Unissued Capital Stock—Common (7)
Capital Stock Subscribed—Common (9)
Capital Stock—Preferred (4)
Unissued Capital Stock—Preferred (5)
Capital Stock Subscribed—Preferred (6)
Treasury Stock—Preferred (4)
Surplus (4)
Ice Cream Sales (7)
Ice Cream Sales Returns (5)
Ice Cream Sales Allowances (4)
Raw Material (5)
Freight In (8)
Direct Labor (7)
Indirect Labor (7)
Ice Expense (4)
Light, Heat and Power (4)
Repairs on Machinery (4)
Factory Repairs (4)
Depreciation on Buildings (4)
Depreciation on Machinery and Factory Equipment (4)
Miscellaneous Factory Expense (5)
Merchandise Sales (16)
Merchandise Purchases (5)
Advertising Expense (5)
Delivery Expense (10)
Miscellaneous Selling Expenses (11)
Officers' Salaries (5)
Loss on Bad Debts (4)
Miscellaneous Expenses (11)
Purchases Discount (5)
Interest Earned (8)
Interest Cost (8)
Manufacturing (14)
Trading (10)
Profit and Loss (12)

The number immediately following each account title indicates the number of lines to be allowed for the account when it is opened in the ledger.

Explanation of Accounts

The purpose of the accounts in the foregoing outline has been explained and illustrated in previous chapters. For this reason few references are required in connection with most of the transactions in the practice set. The following explanations are applicable to the special use of certain accounts in this set:

Cash. An account is maintained with each of the two banks in which deposits are made. Cash receipts, when deposited, are entered in the cash receipts journal in the appropriate "Bank Dr." column, and checks, when issued, are entered in the cash disbursements journal in the appropriate "Bank Cr." column. All cash receipts are deposited, and all payments are made by check except small currency payments, which are provided through a petty cash fund. The cash owned by the business, therefore, is represented by the balances of the two bank accounts and the petty cash fund.

Accrued Accounts Receivable. Accrued accounts receivable are the accounts resulting from accrued income at the close of the fiscal period. For the sake of brevity, all accrued accounts receivable will be shown in one account. The nature of each item will be shown in the explanation column. On the Balance Sheet each item will be shown separately.

Goods in Process. It will be noticed that there is no account for Goods in Process Inventory. Due to the brevity of the manufacturing process, all goods in process are completed each day; consequently, there is no inventory of goods in process at the end of the month. There is also no need for setting up a Goods in Process account during the period of operation. At the end of the month, the raw materials on hand will be deducted from the raw materials purchases plus the inventory of raw materials at the beginning of the month, to determine the cost of the materials used in manufacturing. To this is added the cost of labor and manufacturing expenses for the month to determine the cost of the goods produced during the month. The cost per gallon is ascertained by dividing the total cost of the goods manufactured during the month by the number of gallons manufactured. Although different kinds of cream are manufactured, they differ only as to flavor, color, and form in which used. In the business under consideration, all the cream manufactured is of the same grade and therefore costs the same to produce.

Vouchers Payable. This account takes the place of Accounts Payable. It is a controlling account for the vouchers issued. At the end of the month it is credited with the total vouchers issued during the month as shown by the total of the "Vouchers Payable" column in the voucher register, and debited with the total vouchers paid during the month as shown by the "Vouchers Payable" column in the cash disbursements journal. The balance

of this account shows the total vouchers unpaid at the end of the month.

Accrued Accounts Payable. Accrued accounts payable are the accounts resulting from accrued expenses at the close of the fiscal period. The accrued payables, like the accrued receivables, are shown in one account. The name of each item is entered in the explanation column. On the Balance Sheet the items are shown separately.

Sales. The principal sales of the company are the ice cream which it manufactures; these are termed Ice Cream Sales. For the convenience of customers, ice cream cones, extracts, and similar items are offered for sale; these are termed Merchandise Sales. Customers who buy ice cream are supplied with ice at cost; these sales are credited to the Ice account, thereby reducing the charge for ice to the manufacturing company.

Labor. The wages of factory employes who produce the ice cream manufactured are recorded in the Direct Labor account. This cost appears separately on the Statement of Profit and Loss as one of the three costs entering into the cost of goods manufactured. The wages of factory employes whose work is not applied directly to the manufacturing of the product are recorded in the Indirect Labor account. This cost appears on the Statement of Profit and Loss as one of the manufacturing expenses.

Depreciation. Depreciation on buildings is debited to an account with Depreciation on Buildings, and depreciation on machinery and factory equipment, to an account with Depreciation on Machinery and Factory Equipment. Both of these are manufacturing costs and are grouped with the other manufacturing costs on the Statement of Profit and Loss. Depreciation on office equipment is debited to the Miscellaneous Expenses account, and depreciation on delivery equipment is debited to the Delivery Expense account.

Manufacturing and Trading Accounts. The Manufacturing and Trading accounts are used as summary accounts for closing purposes in the manner explained in Chapter XLVI.

Customers' Accounts. The individual accounts of the customers will be shown in the accounts receivable ledger in alphabetical order according to the following list. The number immediately following each name in the following list indicates the number of lines to be allowed for the account when it is opened in the accounts receivable ledger.

Allen Drug Company (7)
American Cafe (9)
Barnum & Co. (3)
S. M. Black (20)
Castle Hotel (8)
Cline's Restaurant (7)
College Inn (7)
Cooper & Cooper (7)
Cox Drug Store (7)
Cummins & Co. (3)
Engleman's Delicatessen (4)
Excelsior Candy Company (5)

Jackson Hotel (6)
Jenkins Bros. (17)
Jones Company (9)
Lake Side Park Co. (6)
Lake View Pharmacy (5)
Manning Manufacturing Co. (3)
Meisner & Meisner (12)
W. E. Mitchell (7)
Morgan's (9)
Morris & Morris (7)
New York Candy Co. (3)
North Side Boat Club (4)
Olson's Restaurant (3)
Palace Candy Co. (3)
Peterson's Confectionery (6)
M. L. Roberts (7)
Robey & Son (7)
Scott & Lanning (15)
Star Cafeteria (7)
Stewart & Stewart (3)
R. G. Thorley & Son (4)
West Side Drug Store (5)

Creditors' Accounts. When the voucher system is used, it is not necessary to maintain an account with each creditor. A voucher is prepared for each purchase and recorded in the vouchers payable register and the total posted to a Vouchers Payable account which takes the place of Accounts Payable.

Books of Original Entry

The following books of original entry are used in this set: cash receipts journal; cash disbursements journal; sales journal with special columns; sales returns journal; voucher register with special columns; notes receivable and payable journals with special columns; and general journal. Transactions will be posted from these books to the general ledger and the accounts receivable ledger. A controlling account will be maintained in the general ledger for accounts receivable and vouchers payable.

Auxiliary Books

A subscribers journal is used to record subscriptions, and a subscribers cash book to record cash collected on account of subscriptions. These are auxiliary books for convenience in posting to the subscribers ledger. A petty cash book is also maintained as a subsidiary record of payments from the petty cash fund.

Explanation of Books Used

Full information is given on the inside cover of each book of original entry and auxiliary book regarding its use. This is consistent with the discussion of the books previously illustrated.

Corporate Records

An account will be kept with each subscriber for stock in the subscribers ledger, showing the par value of the stock subscribed and payments on the same. When the stock subscribed has all been paid, the account in the subscribers ledger will balance, and an account will be opened with the subscriber in the stockholders ledger. Accounts with subscribers for common and preferred stock will be kept separate both in the subscribers ledger and in the stockholders ledger. The ruling in the subscribers ledger will be the standard form of ledger ruling, and that in the stockholders ledger will be the form illustrated in Chapter XLIII.

PRACTICE SET No. 4

Manufacturing Business

Superior Ice Cream Company, Incorporated

PRELIMINARY DATA

J. A. Parker and H. D. Thompson are operating an ice cream manufacturing business as partners under the firm name of Parker & Thompson. J. A. Parker owns two-thirds and H. D. Thompson one-third of the net assets of the business. J. A. Parker wishes to retire and has agreed to sell his interest to a corporation promoted by H. D. Thompson. It is agreed that this corporation when organized shall pay the partners $135,000.00 for the business.

With this agreement, H. D. Thompson succeeds in interesting some of his business acquaintances. They hold a meeting and decide to incorporate under the name of the Superior Ice Cream Company, with an authorized capital stock of $150,000.00, having one thousand shares of common stock, par value $100.00, and five hundred shares of 7% cumulative preferred stock, par value $100.00. The organizers agree to subscribe for sufficient common stock to provide the necessary working capital for the corporation at the beginning of its operations. Common and preferred stock will be offered for sale on the market as additional funds are needed for the operations of the business.

In pursuance of this policy, the following subscriptions to common and preferred stock are made with the understanding that H. D. Thompson is to accept 450 shares of common stock in payment for his interest in the assets of the partnership; that J. A. Parker is to accept 300 shares of preferred stock in part payment for his interest in the assets of the partnership; and that each of the other subscribers is to pay half of the par value of the stock subscribed upon call of the board of directors and the remaining half in two equal installments, each to be paid on separate calls of the board of directors. H. D. Thompson subscribed for fifty shares in addition to the 450 shares which he accepts as payment for his interest in the partnership.

Subscribers to common stock:

H. D. Thompson, 222 Main St.	500 shares
George Rooney, 605 Main St.	150 shares
M. E. McMahon, 117 Haddon Place	150 shares
A. J. Black, 1401 Walnut St.	15 shares
M. L. Johnson, 1250 Union St.	10 shares

Subscriber to preferred stock:

J. A. Parker	300 shares

July 1 at a meeting of the stockholders, the following were elected as directors: George Rooney, M. E. McMahon, H. D. Thompson, A. J. Black, M. L. Johnson.

The incorporators apply to the Secretary of State for a charter.

July 8 the Secretary of State grants the charter and it is properly registered.

The directors have elected the following officers: George Rooney, President; M. E. McMahon. Vice-President; H. D. Thompson, Secretary-Treasurer.

The entries required are explained below.

Opening Entries

July 9

No. 1. At the meeting of the board of directors held on this date, the following business was transacted:

(1) The bookkeeper was requested to record the authorized capital stock and subscriptions.

(2) It was agreed to purchase the assets of Parker & Thompson, assuming all liabilities as shown by the Balance Sheet prepared at the close of business on this date. (See page 736.) The purchase price is $135,000.00, payable as follows:

(a) J. A. Parker: cash, $10,000.00; four notes for $5,000.00 each, with interest at 6% from July 10, payable in 30, 60, 90 and 120 days respectively; a five-year mortgage note for $30,000.00, with interest at 6%, interest payable semi-annually; 300 shares preferred stock in the Superior Ice Cream Co.

(b) H. D. Thompson: 450 shares of common stock in the Superior Ice Cream Company.

The business of Parker & Thompson is to be taken over as of July 10, and payment is to be made at that time.

(3) A call is issued for payment on July 10 of one-half of the stock subscribed for by the original subscribers.

The actions of the board of directors at this time will require five entries in the general journal: (a) an entry to record the authorized capital stock, (b) an entry to record the subscriptions, (c) two entries to record the purchase of the Parker and Thompson business, and (d) an entry to record the payment of the subscriptions of Parker and Thompson by applying their subscriptions on the amount due them from the sale of their business. Similar entries are shown on pages 629 and 630.

Record the five subscriptions to common stock and the one subscription to preferred stock in the subscribers journal.

Instructions regarding the issue of stock and payment of the former partners are given later.

PARKER & THOMPSON

BALANCE SHEET, JULY 9, 192

ASSETS:				
Accounts Receivable	6,102			
Inventory of Finished Goods	1,975			
Inventory of Merchandise	525			
Inventory of Raw Materials	7,600			
Office Equipment	1,782			
Delivery Equipment	6,400			
Machinery and Factory Equipment	32,400			
Buildings	40,612	50		
Land	30,000			
Total Assets			127,396	50
LIABILITIES:				
Accounts Payable			3,300	
Net Proprietorship			124,096	50

Schedule of Accounts Receivable

Allen Drug Company, 9th and Main	$ 87.50	
American Cafe, 125 Main St.	165.50	
S. M. Black, Maryville	1,510.00	
Castle Hotel, 618 Sixteenth St.	217.00	
College Inn, 532 University Ave.	27.50	
Cox Drug Store, Valley Junction	50.35	
Jackson Hotel, 345 W. Third St.	70.00	
Jenkins Brothers, Maryville	1,468.30	
Lake View Pharmacy, 2176 Lake Ave.	206.20	
Meisner & Meisner, Benwood	840.00	
W. E. Mitchell, 430 Walnut St.	214.50	
Morgan's, 426 W. Fourth St.	19.00	
Scott & Lanning, Clinton	1,226.15	
Total		$6,102.00

Schedule of Accounts Payable

Arctic Ice Co., 192 First St.	$2,150.00	
Johnson Dairy Co., Englewood	49.00	
Lake View Dairy, 456 Market St.	560.28	
South Side Ice Co., 40 W. Second St.	540.72	
Total		$3,300.00

Open an account in the accounts receivable ledger with the customers given in the list on page 732, allowing the space indicated by the number after the name of the account. Since the accounts are to be arranged alphabetically, open all the accounts now so that each will be in the proper order. In practice the bookkeeper would use loose sheets for the customers' accounts and arrange them alphabetically as the accounts were opened. Record in the proper account the amount due each customer as given in the schedule of Accounts Receivable accompanying the Balance Sheet. Verify the correctness of your records.

July 10

No. 2. Vouchers Nos. 1, 2, 3 and 4 have been prepared payable to the creditors of Parker & Thompson, as shown on the schedule of Accounts Payable accompanying the Balance Sheet, and Voucher No. 5 in favor of J. A. Parker for the $10,000.00 cash to be paid him.

The bookkeeper records each voucher issued in the vouchers payable register. The five vouchers in this transaction will require five entries in the vouchers payable record, the amount in each case being entered in the "Vouchers Payable, Cr." column at the left and the "Sundry Accounts, Dr." column at the right. The name of the one to whom the voucher is payable is entered in the name column at the left; Accounts Payable is written in the "Name of Account" column at the right for the first four and Parker & Thompson, Vendors, for the fifth one.

No. 3. Received the following checks in payment for one-half of the stock subscribed: George Rooney, $7,500.00; M. E. McMahon, $7,500.00; H. D. Thompson, $2,500.00; A. J. Black, $750.00; M. L. Johnson, $500.00.

Record the $18,750.00 cash as a credit to the Subscriptions Receivable—Common Stock account in the cash receipts journal; enter the amount in the General Ledger column. Record each cash receipt in the subscribers cash book.

No. 4. H. D. Thompson, the secretary and treasurer of the corporation, has opened an account with the First National Bank and deposited all the checks received on account of stock sold; cash received in the operations of the business will be deposited daily.

An account is kept in the general ledger with the First National Bank, and columns are provided for transactions with the bank in the cash receipts and cash disbursements journals. This deposit will be entered in the cash receipts journal in the "First National Bank" column.

No. 5. Gave J. A. Parker a check for $10,000.00, four notes for $5,000.00 each, a mortgage note for $30,000.00 and 300 shares of preferred stock as per agreement. Issued 450 shares of common stock to H. D. Thompson per agreement.

This transaction will require (a) an entry in the Vouchers Payable and First National Bank columns in the cash disbursements journal, (b) four entries in the notes payable journal, and (c) two entries in the general journal, one to record the mortgage payable and one to record the preferred and common stock issued.

Post to the general ledger accounts from the general journal, cash receipts journal, the "Sundry Accounts, Dr." column in the vouchers payable register and the debits to the Parker & Thompson, Vendors, account in the notes payable journal. When the voucher system is used, the cash disbursements journal is not posted until the end of the month. The totals of the columns are not to be posted at this time.

Post the entries in the subscribers journal to the subscribers ledger. Post also to the subscribers ledger (a) the general journal entry recording the payment of the subscriptions of Parker and Thompson, and (b) the entries in the subscribers cash book. Allow five accounts to a page.

Open accounts in the stockholders ledger and record the common and preferred stock issued in the proper accounts.

Memoranda of Transactions for July

July 11

No. 6. R. W. Boyd, 609 Market St., subscribed for six shares common stock. Received his check for $300.00, in payment of the first installment of fifty per cent. Payment of the balance is subject to the call of the board of directors the same as other stock that has been issued.

Enter in the general journal, cash receipts journal, subscribers journal, and subscribers cash book.

No. 7. Issued Voucher No. 6 to the Remington Typewriter Co. for the purchase of a new typewriter, $110.00. Gave in payment, an old typewriter valued at $55.00 and Check No. 2 on the First National Bank for $55.00.

Record the voucher in the voucher register and the allowance for the old typewriter in the general journal. Debit Office Equipment in the "Sundry Accounts" column in the voucher register for the purchase price of th new typewriter. Debit Vouchers Payable and credit Office Equipment in the general journal for the value of the old typewriter. Enter the check in the "Vouchers Payable" column in the cash disbursements journal.

No. 8. Sales on account for the day as follows:

American Cafe, 125 Main St.	Ice Cream	$ 17.00
Jackson Hotel, 345 W. Third St.	" "	22.00
Castle Hotel, 618 16th St.	" "	23.00
Lake View Pharmacy, 2176 Lake Ave.	" "	27.00
	Merchandise	12.75
Lake Side Park Co., Lake Side Park	Ice Cream	57.00
	Ice	1.50
Jones Company, 610 Plum St.	Ice Cream	16.50
Meisner & Meisner, Benwood	" "	119.00

Frequently, the entries in the accounts receivable ledger are made direct from the carbon copies of the invoices and duplicate invoices are filed as the sales book record. In this set the original entries for sales will be made in the sales journal and the entry in the individual accounts posted from this record.

No. 9. Cash sales for the day: ice cream, $27.50.

Enter in the "Ice Cream Sales" column in the cash receipts journal.

No. 10. Deposited the cash received today ($327.50) in the First National Bank.

July 12

No. 11. Issued Vouchers Nos. 7, 8, 9, 10, and 11 for the following purchases:

American Printing Co., Commercial Tribune Bldg., account; stationery, books and supplies, $123.35.

Steubing Truck Co., 18 Front St., 3/10, n/30; trucks, $87.00.

Lake View Dairy, 456 Market St., account; milk, $152.00.

Landis & Co., Morristown, 2/10, n/30; sugar and other raw materials, $920.00.

Arctic Ice Co., 192 First St., account; ice, $17.38.

Debit Office Supplies for the first invoice, Machinery and Factory Equipment for the second, Raw Material for the third and fourth invoices, and Ice for the fifth invoice. The first and second entries are made in the "Sundry Accounts" column and the other three in the special columns provided in the voucher register. Milk, sugar, eggs, flavoring, etc., constitute raw materials used in the manufacture of ice cream. Ice is purchased for resale and the packing of ice cream, but is not regarded as one of the raw materials which enter into the manufacture of ice cream, hence the cost is entered in a special account.

July 13

No. 12. J. H. Rainsberger, 301 Central Ave., subscribed for twelve shares common stock. Received his check for $600.00, in payment of the first installment of fifty per cent. Payment of the balance is subject to the call of the board of directors.

No. 13. Sales on account for the day as follows:

S. M. Black, Maryville	Ice Cream	$184.00
West Side Drug Store, West Side	" "	16.50
	Merchandise	2.85
Star Cafeteria, 400 E. Fifth St.	Ice Cream	27.50
	Ice	1.00
Allen Drug Co., 9th and Main	Ice Cream	47.00
Morris & Morris, 2215 Burnett Ave.	" "	49.50
Jenkins Brothers, Maryville	" "	299.00
	Merchandise	16.75

No. 14. Cash sales for the day: ice cream, $66.00.

No. 15. Received checks from customers as follows: Allen Drug Co., $87.50; Castle Hotel, $200.00; Jackson Hotel, $50.00; Jenkins Brothers, $1,000.00.

Enter in the "Accounts Receivable" column in the cash receipts journal.

No. 16. Deposited the cash received today ($2,003.50) in the First National Bank.

July 15

No. 17. Received the following subscriptions to common stock:

G. Justus, 1121 Sherman Ave.	6 shares
C. E. Buchanan, 1012 Jones St.	4 shares
H. G. Booth, 1057 Flint St.	10 shares
G. F. Cooper, 935 Laurel St.	7 shares

Enter in the general journal in one amount and in the subscribers journal separately.

No. 18. Received a check from each for one-half of the par value of the stock subscribed (see preceding transaction).

Enter in the cash receipts journal in one amount and in the subscribers cash book separately.

No. 19. Issued Voucher No. 12 and withdrew from the First National Bank by our Check No. 3, $25.00, to be used as a petty cash fund.

Debit Petty Cash in the cash disbursements journal and enter in the "Receipts" column in the petty cash book.

No. 20. Issued Voucher No. 13 for the following purchase on account:

Arctic Ice Co., 192 First St.; ice delivered today, $24.00.

No. 21. Mr. Thompson has opened an account with the Farmers Trust Company and deposited the cash received today ($1,350.00) in this bank.

Enter in the "Farmers Trust Company" column in the cash receipts journal in the manner in which other deposits were entered.

No. 22. Issued Voucher No. 14 for $632.75, pay roll to date, distributed as follows: Direct Labor, $278.00; Indirect Labor, $110.25; Miscellaneous Expenses, $62.00; Delivery Expenses, $142.50; Miscellaneous Selling Expenses, $40.00. Withdrew from the Farmers Trust Company by our Check No. 1 a sufficient amount to pay this pay roll.

Enter the voucher in the voucher register and the check in the cash disbursements journal. Special columns are provided in the voucher register for the distribution of the pay roll. Employes of the corporation, except the officials, are paid on the 1st and 15th of each month; the officials will receive checks for their salaries on the last day of each month.

July 16

No. 23. John Smith, 291 Grandin Road, subscribed for five shares common stock. Received his check for $250.00, in payment of the first installment of fifty per cent.

No. 24. Issued Voucher No. 15 for the following purchase:

Greenwood & Son, 1016 Woodward Ave., 3/10, 2/30, n/60; extracts, flavoring, and other raw materials, $750.00.

No. 25. Sales on account for the day as follows:

Robey & Son, 1615 Woodburn Ave.	Ice Cream	$22.00
	Merchandise	1.87
Morris & Morris, 2215 Burnet Ave.	Ice Cream	16.50
Cox Drug Store, Valley Junction	" "	22.00
Engleman's Delicatessen, 1465 Curtiss St.	" "	11.00
	Ice	.50
W. E. Mitchell, 430 Walnut	Ice Cream	33.00
R. G. Thorley & Son, 818 Elm St.	" "	22.00
	Merchandise	6.75
Cooper & Cooper, 721 Broad St.	Ice Cream	24.50
Allen Drug Co., 9th and Main	" "	23.00
Morgan's, 426 W. 4th St.	" "	33.00
	Ice	1.00
Peterson's Confectionery, 1400 W. 12th St.	Ice Cream	11.00

No. 26. Deposited the cash received today ($250.00) in the First National Bank.

July 17

No. 27. R. H. Blackburn, 268 McMillan St., subscribed for fifty shares preferred stock. Received his check for $2,500.00, in payment of the first installment of fifty per cent. Payment of the balance is subject to the call of the board of directors in the same manner as common stock.

No. 28. Paid $10.00 from the petty cash fund for stamps to be used in the office and the sales department.

Enter in the petty cash book; divide the charge equally between Office Supplies and Sales Dept. Supplies. No voucher is required for a payment from the petty cash fund, as a voucher was issued for the entire fund when it was withdrawn from the bank.

No. 29. Issued Vouchers Nos. 16 and 17 for the following purchases on account:

D. Smithland, Dayton; milk, $60.80.
Arctic Ice Co., 192 First St.; ice, $34.21.

No. 30. Sales on account for the day as follows:

Star Cafeteria, 400 E. Fifth St.	Ice Cream	$ 22.00
Olson's Restaurant, Central R. R. Station	" "	22.00
S. M. Black, Maryville	" "	204.00
	Ice	3.00
	Merchandise	10.50
Jenkins Brothers, Maryville	Ice Cream	230.00
Scott & Lanning, Clinton	" "	115.00
North Side Boat Club, North Side	" "	66.00
	Merchandise	7.35
Jones Company, 610 Plum St.	Ice Cream	55.00
Cline's Restaurant, 1018 Walnut St.	" "	44.00

No. 31. Cash sales for the day: ice cream, $112.00.

No. 32. Deposited the cash received today ($2,612.00) in the First National Bank.

July 18

No. 33. Paid $2.15 from petty cash fund for pens and ink for office use.

No. 34. Issued credit memorandum to S. M. Black for $11.00, value of ice cream returned.

Enter in the sales returns journal in the proper column.

No. 35. Issued Voucher No. 18 for $18.00 in favor of the Motor Service Co., for repairs on delivery truck as per bill rendered. Paid this voucher by Check No. 2 on the Farmers Trust Company.

No. 36. Issued Vouchers Nos. 19 and 20 for the following purchases on account:

Landis & Co., Morristown; merchandise, $78.50; raw materials, $160.00; total, $238.50.

Johnson Dairy Co., Englewood; milk, $60.80.

No. 37. Issued Voucher No. 21 for $11.85 in favor of the C. & N. W. Ry. Co., for freight on raw materials purchased. Paid this voucher by Check No. 4 on the First National Bank.

Debit Freight In in the voucher register entry.

No. 38. Sales on account for the day as follows:

S. M. Black, Maryville	Ice Cream	$225.00
College Inn, 532 University Ave.	" "	22.00
Jenkins Brothers, Maryville	" "	257.50
Lake Side Park Co., Lake Side Park	" "	66.00
	Merchandise	12.60
	Ice	10.50
Cline's Restaurant, 1018 Walnut St.	Ice Cream	92.50

No. 39. Cash sales for the day: ice cream, $126.50.

No. 40. Deposited the cash received today ($126.50) in the Farmers Trust Company.

July 19

No. 41. Issued credit memorandum to Jenkins Brothers for $22.00, value of ice cream returned.

No. 42. Issued Vouchers Nos. 22 and 23 for the following purchases on account:

Blue Valley Creamery, Blue Valley; milk, $1,500.00.
Arctic Ice Co., 192 First St.; ice, $63.20.

No. 43. Received the following subscriptions for common stock:

C. D. Norris, 101 W. Third St.	5 shares
E. F. Gregg, 1063 Rose St.	20 shares
J. E. Nixon, 917 Race St.	20 shares
Thomas Hover, 1019 Broadway	30 shares
George Musselmann, 301 Hunt St.	5 shares

No. 44. Received a check for the first installment of fifty per cent of each of the subscriptions to stock received today.

No. 45. Received checks from customers as follows: Scott & Lanning, $500.00; College Inn, $50.00; Lake Side Park Co., $47.00.

No. 46. Received from S. M. Black check for $502.00 and note for $1,000.00, in payment of balance due July 10. This note is in favor of S. M. Black, dated June 1, due in 60 days, with interest at 6% from date, payable at the First National Bank of Dayton, signed by J. M. Walker, of Dayton, and endorsed by Mr. Black. It is accepted at its present value, which is the face plus interest to date.

Enter the check in the cash receipts journal and the note and interest in the notes receivable journal.

No. 47. Deposited $500.00 in the Farmers Trust Company and the balance of the cash received today ($4,599.00) in the First National Bank.

July 20

No. 48. Paid $1.00 from petty cash for carbon paper.

No. 49. Received $50.00 from Morris & Morris on account.

No. 50. Issued Voucher No. 24 for $115.68 for an office desk purchased from the Empire Furniture Co., 1301 Mitchell Ave. Paid from the petty cash fund $4.26 express on the desk.

The invoice for the value of the desk is entered in the voucher register. Debit the express to the cost of the desk in the petty cash book.

No. 51. Sales on account for the day as follows:

Scott & Lanning, Clinton	Ice Cream	$160.00
Morgan's, 426 W. 4th St.	" "	23.00
Cooper & Cooper, 721 Broad St.	" "	24.00
	Ice	2.50
Meisner & Meisner, Benwood	Ice Cream	154.00
	Ice	5.00
W. E. Mitchell, 430 Walnut St.	Ice Cream	27.50
R. G. Thorley & Son, 818 Elm St.	" "	182.50
	Merchandise	47.50
Robey & Son, 1615 Woodburn Ave.	Ice Cream	82.50
	Merchandise	12.65

No. 52. Cash sales for the day: ice cream, $112.50.

No. 53. Deposited the cash received today ($162.50) in the Farmers Trust Company.

July 22

No. 54. Issued Vouchers Nos. 25 and 26 for the following purchases on account:

South Side Ice Co., 40 W. Second St.; ice, $26.50.
Arctic Ice Co., 192 First St.; ice, $47.38.

No. 55. Received the following subscriptions for preferred stock:

J. A. Everhart, 1012 Eastern Ave.	25 shares
D. O. Conner, Sr., 112 Clifton Ave.	10 shares
D. O. Conner, Jr., 112 Clifton Ave.	5 shares

No. 56. Received a check from Everhart for $1,250.00, and D. O. Conner, Sr., for $750.00, in payment for the first installment of fifty per cent of the subscriptions received today.

No. 57. Issued Check No. 5 for $123.35 on the First National Bank in favor of the American Printing Co., in payment of Voucher No. 7; Check No. 6 for $901.60 in favor of Landis & Co., in payment of Voucher No. 10, less discount; and Check No. 7 for $84.39 in favor of the Steubing Truck Co., in payment of Voucher No. 8, less discount, per terms of the invoices.

The amount of the voucher is entered in the "Vouchers Payable" column in the cash disbursements journal, and the discount in the "Purchases Discount" column on the same line.

No. 58. Sales on account for the day as follows:

Jenkins Brothers, Maryville	Ice Cream	$350.00
Scott & Lanning, Clinton	" "	230.00
Meisner & Meisner, Benwood	" "	115.00
	Merchandise	37.50

Cash sales for the day: ice cream, $49.50.

No. 59. Deposited the cash received today ($2,049.50) in the Farmers Trust Company.

July 23

No. 60. Issued credit memorandum to Jenkins Brothers for $16.00, value of ice cream returned.

No. 61. Issued Vouchers Nos. 27, 28, and 29 for the following purchases:

Lake View Dairy, 456 Market St., account; milk, $91.20

Altman & Co., Greenwood, July 20, 3/10, n/30; cartons for brick ice cream, $20.00.

South Side Bakery Co., South Side, account; ice cream cones, $47.50.

Debit Raw Material for the second purchase and Merchandise Purchases for the third.

No. 62. Paid from the petty cash fund $4.42 express charges on shipment of raw materials.

Debit Freight In.

No. 63. Sales on account for the day as follows:

S. M. Black, Maryville	Ice Cream	$242.00
Cox Drug Store, Valley Junction	" "	27.50
Morris & Morris, 2215 Burnet Ave.	" "	22.00
Robey & Son, 1615 Woodburn Ave.	" "	28.50
Star Cafeteria, 400 E. Fifth St.	" "	35.00
Cline's Restaurant, 1018 Walnut St.	" "	79.50

No. 64. Cash sales for the day: ice cream, $26.90.

No. 65. Issued Voucher No. 30 for $21.83, amount expended from the petty cash fund as per the record in the petty cash book. Withdrew this amount from the First National Bank by Check No. 8 to replenish the petty cash fund.

No. 66. Deposited the cash received today ($26.90) in the Farmers Trust Company.

July 24

No. 67. Paid $2.65 from the petty cash fund for telegrams.

No. 68. Received the following subscriptions for stock:

G. A. Vanderberg, 838 Reading Road	20 shares common
J. R. Davis, Columbus	15 shares common
Charles Smith, Pittsburgh	100 shares preferred

No. 69. Received a check in payment for the first installment of fifty per cent for each of the subscriptions to capital stock received today.

No. 70. Issued Voucher No. 31 for the following purchase on account:

South Side Ice Co., 40 W. Second St., ice, $18.50.

No. 71. Sales on account for the day as follows:

Jones Company, 610 Plum St.	Ice Cream	$49.50
	Cones	12.00
Excelsior Candy Co., 902 Locust St.	Ice Cream	27.50
Lake Side Park Co., Lake Side Park	" "	68.00
Castle Hotel, 618 16th St.	" "	35.00

No. 72. Cash sales for the day: ice cream, $11.00.

No. 73. Deposited the cash received today ($6,761.00) in the First National Bank.

July 25

No. 74. Received from Meisner & Meisner a note for $500.00 signed by C. R. Carter, dated July 13, and due in 60 days. This note is accepted to apply on account less interest at 6% to maturity.

No. 75. Sales on account for the day as follows:

Jenkins Brothers, Maryville	Ice Cream	$225.50
	Ice	3.50
Scott & Lanning, Clinton	Ice Cream	136.00
American Cafe, 125 Main St.	Merchandise	12.75

No. 76. Charles Smith reported that he would be out of town for about thirty days, and, in anticipation of the call of the board of directors, he gave his note for $2,500.00, dated today, due in 30 days, with interest at 6%, in payment for the second installment of 25% on stock subscribed.

No. 77. Sent the note signed by J. M. Walker to the First National Bank at Dayton for collection and remittance.

When a note is sent for collection the endorsement of the payee is qualified by writing "For collection" above it. Since the auditor will expect to find a note in the safe for each unpaid note recorded in the notes receivable journal, a notation of the fact that it has been sent for collection should be made in the "Remarks" column of the notes receivable journal.

No. 78. Cash sales for the day: ice cream, $23.50.

No. 79. Deposited the cash received today ($23.50) in the Farmers Trust Company.

July 26

No. 80. Issued Vouchers Nos. 32 and 33 for the following purchases on account:

Johnson Dairy Co., Englewood; milk, $86.50.
Arctic Ice Co., 192 First St.; ice, $12.00.

No. 81. Received checks from customers as follows: S. M. Black, $450.00; Jackson Hotel, $50.00; Morris & Morris, $38.00.

No. 82. Paid 75¢ from the petty cash fund to the truck driver for his dinner on a more than ordinarily long trip.

No. 83. The Lake Side Park Co. returned part of the ice cream sold them on the 24th because it was received in bad condition, on account of leaking cans. Issued a credit memorandum in their favor for $13.20, value of this cream.

Debit Ice Cream Sales Allowances in the general journal. If such allowances occurred frequently, a special column would be provided for them in the sales returns and allowances journal, as in Illustration No. 68, page 452.

No. 84. Issued our Check No. 9 for $727.50 on the First National Bank in favor of Greenwood & Son, in payment of Voucher No. 15, less discount as per terms.

No. 85. Sales on account for the day as follows:

Meisner & Meisner, Benwood	Ice Cream	$ 85.00
S. M. Black, Maryville	" "	204.00
American Cafe, 125 Main St.	" "	34.00
	Ice	2.00
Lake View Pharmacy, 2176 Lake Ave.	Ice Cream	22.00
Jenkins Brothers, Maryville	" "	234.00

No. 86. Cash sales for the day: ice cream, $62.50.

No. 87. Deposited the cash received today ($600.50) in the Farmers Trust Company.

July 27

No. 88. Issued Vouchers Nos. 34, 35, and 36 for the following purchases:

D. Smithland, Dayton, account; milk, $84.00.

Altman & Co., Greenwood, 3/10, n/30; cartons for brick ice cream, $60.00.

Alfalfa Creamery Co., 404 Main St., account; milk, $520.00.

No. 89. Issued Voucher No. 37 for $6.58 in favor of the American Express Co., for express charges on cartons. Paid this voucher by Check No. 10 on the First National Bank.

Debit Freight In for the amount of the voucher.

No. 90. Sales on account for the day as follows:

Jones Company, 610 Plum St.	Ice Cream	$ 18.00
	Ice	1.50
American Cafe, 125 Main St.	Ice Cream	16.50
Jackson Hotel, 345 W. Third St.	" "	45.00
Lake Side Park Co., Lake Side Park	" "	82.00
Cline's Restaurant, 1018 Walnut St.	" "	71.50
	Merchandise	11.00
North Side Boat Club, North Side	Ice Cream	34.00
	Merchandise	8.75
Jenkins Brothers, Maryville	Ice Cream	280.00
	Merchandise	8.00
	Ice	2.50

No. 91. Cash sales for the day: ice cream, $137.50.

No. 92. Deposited the cash received today ($137.50) in the Farmers Trust Company.

July 29

No. 93. Received credit memorandum from Landis & Co. for $12.50 to correct error due to shortage in shipment of raw materials received from them as per purchase invoice of July 18.

Enter in the general journal; debit Vouchers Payable.

No. 94. Issued Voucher No. 38 for $31.50 in favor of the Arctic Ice Co., 192 First St., for ice purchased on account as per invoice.

No. 95. Sales on account for the day as follows:

Meisner & Meisner, Benwood	Ice Cream	$115.00
S. M. Black, Maryville	" "	225.00
College Inn, 532 University Ave.	" "	22.50
Star Cafeteria, 400 E. Fifth St.	" "	27.50
	Merchandise	6.50
Morgan's, 426 W. 4th St.	Ice Cream	33.00
Castle Hotel, 618 16th St.	" "	44.00

No. 96. Issued Voucher No. 39 for $250.00 in favor of the Daily News, for advertising bill rendered today. Paid this voucher by Check No. 11 on the First National Bank.

Debit Advertising Expense for the amount of the voucher.

No. 97. Cash sales for the day: ice cream, $170.50.

No. 98. Deposited the cash received today ($170.50) in the Farmers Trust Company.

July 30

No. 99. Issued Check No. 12 for $226.00 on the First National Bank in favor of Landis & Co., in payment of Voucher No. 19, less the credit for shortage per credit bill received on the 29th.

No. 100. Issued Voucher No. 40 for $27.00 in favor of the South Side Ice Co., 40 W. Second St., for ice purchased on account per invoice of this date.

No. 101. Sales on account for the day as follows:

Excelsior Candy Co., 902 Locust St.	Ice Cream	$ 23.00
Cline's Restaurant, 1018 Walnut St.	" "	56.00
	Merchandise	17.50
S. M. Black, Maryville	Ice Cream	275.00
	Ice	5.00
Jenkins Brothers, Maryville	Ice Cream	245.00
	Ice	2.50
Jones Company, 610 Plum St.	Ice Cream	5.50

No. 102. Cash sales for the day: ice cream, $33.50.

No. 103. Deposited the cash received today ($33.50) in the Farmers Trust Company.

July 31

No. 104. Issued Check No. 13 for $1,500.00 on the First National Bank in favor of the Blue Valley Creamery, in payment for Voucher No. 22, and Check No. 14 for $19.40 in favor of Altman & Co., in payment for Voucher No. 28, less discount.

No. 105. Issued credit memorandum to Cline's Restaurant for $11.00, value of ice cream returned.

No. 106. Received checks from customers as follows: Star Cafeteria, $85.50; Robey & Son, $147.52; Engleman's Delicatessen, $11.50; West Side Drug Store, $19.35.

No. 107. Gave the Arctic Ice Co. our note for $2,000.00, due in 30 days from date, with interest at 6%, payable at the First National Bank, to apply on balance due July 10, Voucher No. 1.

Enter in the "Vouchers Payable" column in the notes payable journal.

No. 108. Issued Voucher No. 41 for $1,000.00 for the following salaries of officers: George Rooney, $400.00; M. E. McMahon, $300.00; H. D. Thompson, $300.00. Paid this voucher by Checks Nos. 15, 16, and 17 on the First National Bank.

Debit Officers Salaries for the amount of the voucher.

No. 109. Sales on account for the day as follows:

Castle Hotel, 618 16th St.	Ice Cream	$ 30.00
American Cafe, 125 Main St.	" "	16.50
S. M. Black, Maryville	" "	157.50
	Ice	4.50
Allen Drug Co., 9th and Main	Ice Cream	34.50
	Merchandise	3.50
	Ice	2.50
W. E. Mitchell	Ice Cream	22.00

No. 110. Cash sales for the day: ice cream, $121.00.

No. 111. Deposited the cash received today ($384.87) in the Farmers Trust Company.

INSTRUCTIONS: 1. Prove cash (balance in First National Bank, $20,350.50; balance in Farmers Trust Company, $4,915.02).

2. Foot and rule the books of original entry and post all entries, including the totals of the special columns.

3. Take a Trial Balance of the general ledger.

4. Prepare a list of the customers, showing the amount due from each as shown by the accounts receivable ledger, and prove the total by comparing it with the balance of the controlling account in the general ledger.

5. Prepare a list of the unpaid vouchers as shown by the voucher register, and prove the total by comparing it with the balance of the Vouchers Payable account in the general ledger.

6. Prepare a list of the subscribers, showing the amount due from each as shown by the subscribers ledger, and prove the total by comparing it with the balance of the Subscribers accounts in the general ledger.

Memoranda of Transactions for August

August 1

No. 112. Issued Voucher No. 42 for $1,566.25, pay roll to date, distributed as follows: Direct Labor, $343.45; Indirect Labor, $225.00; Miscellaneous Expenses, $724.00; Delivery Expenses, $161.30; Miscellaneous Selling Expenses, $112.50. Withdrew from the Farmers Trust Company by our Check No. 3 a sufficient amount to pay this pay roll.

No. 113. Sales on account for the day as follows:

College Inn, 532 University Ave.	Ice Cream	$ 16.50
S. M. Black, Maryville	" "	170.00
	Ice	4.00
	Merchandise	13.75
Meisner & Meisner, Benwood	Ice Cream	234.50
Morgan's, 426 W. 4th St.	" "	28.00
Scott & Lanning, Clinton	" "	347.50
	Ice	3.50

No. 114. Cash sales for the day: ice cream, $247.50.

No. 115. Deposited the cash received today ($247.50) in the First National Bank.

August 2

No. 116. Issued Check No. 18 for $196.30 on the First National Bank in favor of Johnson Dairy Co. in payment of Vouchers Nos. 2, 20, and 32; Check No. 19 for $379.67 in favor of Arctic Ice Co. in payment of Vouchers Nos. 11, 13, 17, 23, 26, 33, and 38, and balance due on Voucher No. 1; Check No. 20 for $612.72 in favor of South Side Ice Co. in payment of Vouchers Nos. 4, 25, 31, and 40; and Check No. 21 for $520.00 in favor of the Alfalfa Creamery Co. in payment of Voucher No. 36.

No. 117. Sales on account for the day as follows:

Morris & Morris, 2215 Burnet Ave.	Ice Cream	$ 57.50
	Merchandise	6.25
Cooper & Cooper, 721 Broad St.	Ice Cream	407.00
Meisner & Meisner, Benwood	" "	82.50
S. M. Black, Maryville	" "	37.50

No. 118. Cash sales for the day: ice cream, $55.00.

No. 119. Received checks from the following on account: North Side Boat Club, $116.10; Excelsior Candy Co., $50.50; R. G. Thorley & Son, $258.75; Star Cafeteria, $34.00; Jones Company, $158.00; Lake Side Park Co., $200.00; Meisner & Meisner, $900.00.

No. 120. Deposited $1,500.00 in the Farmers Trust Company and the balance of the cash received today ($272.35) in the First National Bank.

August 3

No. 121. The board of directors has issued a call for the second installment of 25% of the purchase price of common and preferred stock subscribed, payable August 10.

No entry is required other than that in the minute book which was made by the secretary while the board was in session.

No. 122. Sales on account for the day as follows:

Jenkins Brothers, Maryville	Ice Cream	$360.00
	Ice	7.50
College Inn, 532 University Ave.	Ice Cream	27.50

No. 123. Cash sales for the day: ice cream, $220.00; merchandise, $42.50; ice, $8.25.

No. 124. Issued Vouchers Nos. 43 and 44 for the following purchases on account:

Lake View Dairy, 456 Market St.; milk, $74.00.
Blue Valley Creamery, Blue Valley; milk, $208.00.

No. 125. Deposited the cash received today ($270.75) in the First National Bank.

August 5

No. 126. Paid from the petty cash fund as follows: Citizens Ice Co., ice, $4.00; American Express Co., express on shipment of ice cream, $2.50; stamps for use in office, $2.00; postal cards for use in selling department, $1.00.

No. 127. Received checks from customers as follows: Allen Drug Co., $110.50; American Cafe, $264.25; S. M. Black, $1,000.00.

No. 128. Sales on account for the day as follows:

W. E. Mitchell, 430 Walnut St.	Ice Cream	$ 71.50
Peterson's Confectionery, 1400 W. 12th St.	" "	5.50
Jones Company, 610 Plum St.	" "	165.00
S. M. Black, Maryville	" "	415.00
	Merchandise	17.40
	Ice	4.75

No. 129. Cash sales for the day: ice cream, $225.00; merchandise, $25.50.

No. 130. Deposited the cash received today ($1,625.25) in the First National Bank.

August 6

No. 131. Issued Vouchers Nos. 45, 46, and 47 for the following invoices:

Arctic Ice Co., 192 First St., account; ice, $22.50.

Greenwood & Son, 1016 Woodward Ave., 3/10, 2/30, n/60; raw materials, $50.00.

American Express Co., express on empty cans and pails returned to us, $22.38. Paid this voucher by Check No. 22 on First National Bank.

When our truck can not collect the empty containers, customers return them by express collect. The invoice from the American Express Co. is for express on these shipments to date. Debit Delivery Expenses.

No. 132. Issued Check No. 4 for $58.20 on the Farmers Trust Company in favor of Altman & Co. in payment of Voucher No. 35, less discount.

No. 133. Sales on account for the day as follows:

Allen Drug Co., 9th and Main	Ice Cream	$ 28.00
S. M. Black, Maryville	" "	340.00
	Ice	2.50
Meisner & Meisner, Benwood	Ice Cream	228.00
	Merchandise	12.50

No. 134. Cash sales for the day: ice cream, $335.00; merchandise, $24.50.

No. 135. Issued credit memorandums for ice cream returned as follows: S. M. Black, $22.00; W. E. Mitchell, $5.50.

No. 136. Received $100.00 from J. A. Anderson for one share preferred stock.

Credit Unissued Capital Stock—Preferred in the cash receipts journal. No entry is made in the Subscribers to Preferred Stock account. Why?

No. 137. Deposited the cash received today ($459.50) in the First National Bank.

August 7

No. 138. Issued Check No. 23 for $115.68 on the First National Bank in payment of Voucher No. 24.

No. 139. Sales on account for the day as follows:

Star Cafeteria, 400 E. Fifth St.	Ice Cream	$ 22.50
	Merchandise	5.50
Jenkins Brothers, Maryville	Ice Cream	500.00
	Ice	4.00
Robey & Son, 1615 Woodburn Ave.	Ice Cream	85 00

No. 140. Cash sales for the day: ice cream, $205.00; ice, $0.50; merchandise, $2.50.

No. 141. Deposited the cash received today ($208.00) in the Farmers Trust Company.

August 8

No. 142. Issued Voucher No. 48 for $187.50 in favor of the City Service Company for electric power per bill rendered. Paid this voucher by Check No. 5 on the Farmers Trust Company.

No. 143. Issued Vouchers Nos. 49, 50, and 51 for the following purchases:

Blue Valley Creamery, Blue Valley, account; raw materials, $208.00.
Arctic Ice Co., 192 First St., account; ice, $26.60.
Mose & Lane, 26 Sycamore St., 2/10, n/30; merchandise, $110.20.

No. 144. Sales on account for the day as follows:

Meisner & Meisner, Benwood	Ice Cream	$280.00
	Ice	2.00
Scott & Lanning, Clinton	Ice Cream	192.50

No. 145. Cash sales for the day: ice cream, $126.50; merchandise, $0.75.

No. 146. Deposited the cash received today ($127.25) in the First National Bank.

August 9

No. 147. Issued Voucher No. 52 for $5,025.00, amount of thirty-day note given J. A. Parker on July 10 and due today, and interest. Paid this voucher by Check No. 24 on the First National Bank.

No. 148. Paid $5.00 from the petty cash fund for subscription to the Ice Cream Makers Journal.

Debit Miscellaneous Expenses.

No. 149. Issued Vouchers Nos. 53 and 54 for the following invoices:

Scott & Scott, 51–63 Millsdale Ave., account; factory supplies, $15.20.
C., C. & L. R. R. Co., freight on raw materials, $2.35. Paid this voucher by Check No. 6 on the Farmers Trust Company.

No. 150. Sales on account for the day as follows:

Cox Drug Store, Valley Junction	Ice Cream	$ 38.50
	Merchandise	2.50
Scott & Lanning, Clinton	Ice Cream	142.50
	Ice	4.50

No. 151. Cash sales for the day: ice cream, $148.00.

No. 152. Deposited the cash received today ($148.00) in the First National Bank.

August 10

No. 153. Received checks in payment of 25% of the stock subscribed as listed on page 753.

COMMON—

H. D. Thompson	$1,250.00	G. F. Cooper	$175.00
George Rooney	3,750.00	John Smith	125.00
M. E. McMahon	3,750.00	C. D. Norris	125.00
A. J. Black	375.00	E. F. Gregg	500.00
M. L. Johnson	250.00	J. E. Nixon	500.00
R. W. Boyd	150.00	Thomas Hover	750.00
J. H. Rainsberger	300.00	George Musselmann	125.00
G. Justus	150.00	G. A. Vanderberg	500.00
C. E. Buchanan	100.00	J. R. Davis	375.00
H. G. Booth	250.00		

PREFERRED—

R. H. Blackburn	$1,250.00	D. O. Conner, Sr.	$250.00
J. A. Everhart	625.00	D. O. Conner, Jr.	125.00

No. 154. Sales on account for the day as follows:

Robey & Son, 1615 Woodburn Ave.	Ice Cream	$225.00
Morris & Morris, 2215 Burnet Ave.	" "	230.00
Jones Company, 610 Plum St.	" "	12.00

No. 155. Cash sales for the day: ice cream, $434.50; merchandise, $2.10.

No. 156. Deposited the cash received today ($16,186.60) in the Farmers Trust Company.

August 12

No. 157. Paid 50¢ from the petty cash fund for messenger service.

No. 158. Issued a credit memorandum to Robey & Son for $19.80, value of ice cream returned.

No. 159. Sales on account for the day as follows:

S. M. Black, Maryville	Ice Cream	$346.50
Castle Hotel, 618 16th St	" "	22.00
Cooper & Cooper, 721 Broad St.	" "	27.50
Scott & Lanning, Clinton	" "	458.50

No. 160. Cash sales for the day: ice cream, $140.00.

No. 161. Deposited the cash received today ($140.00) in the Farmers Trust Company.

August 13

No. 162. J. A. Parker has agreed to accept payment of the $5,000.00 note due September 8. Issued Voucher No. 55 for $5,028.33, face of the note plus interest to date, and paid this voucher by Check No. 25 on the First National Bank.

No. 163. Issued Voucher No. 56 for $92.00 in favor of the Day Machine Works for repairs on machinery.

No. 164. J. A. Parker has sold twenty shares of preferred stock to L. D. Nelson and presented Certificate No. 1, issued to him, in exchange for a new certificate and the proper transfer.

Two new certificates have been issued, one to him for the stock which he now owns, and one to L. D. Nelson for the twenty shares he has purchased.

NOTE—If the stock certificates book is not provided, the student should study the transfer information that should be given in connection with the certificate of stock issued on transfer and make a memorandum entry in the general journal from which the desired accounts in the stock ledger may be opened.

No. 165. Received checks from customers as follows: S. M. Black, $1,000.00; Castle Hotel, $49.00; College Inn, $36.50; Cox Drug Store, $140.85.

No. 166. Paid Vouchers Nos. 16 and 34 by Check No. 26 and Voucher No. 29 by Check No. 27 on the First National Bank.

No. 167. Sales on account for the day as follows:

Morgan's, 426 W. 4th St.	Ice Cream	$22.00
Engleman's Delicatessen, 1465 Curtiss St.	" "	81.00
	Merchandise	4.78

No. 168. Cash sales for the day: ice cream, $115.00; merchandise, $7.64.

No. 169. Deposited the cash received today ($1,348.99) in the First National Bank.

August 14

No. 170. Issued Voucher No. 57 for bill received from the American Printing Co. for the following: 5,000 each letterheads and envelopes for use in the office, $45.00; 5,000 circulars for advertising, $20.50.

No. 171. Received a check for $375.00 from A. J. Black in payment of the balance due on stock purchased by him. Mr. Black has sold seven shares of his stock to L. B. Saunders and requested that two certificates be issued, one to him for the stock which he now owns and one to L. B. Saunders for the seven shares he has purchased.

No. 172. Issued Voucher No. 58 for $3,000.00 in favor of the Citizens Motor Car Co. for a Packard truck. Gave in payment of this voucher our Check No. 7 on the Farmers Trust Company for $1,000.00, our note for $1,000.00 due in thirty days with interest at 6% from date, and a used truck taken over from Parker & Thompson at a value of $1,000.00.

No. 173. Issued Vouchers Nos. 59, 60, 61, 62, and 63 for the following purchases on account:

Brown Hardware Co., 693 Warsaw Ave.; factory supplies, $16.20.

National Tire Co., 25 Court St.; tire for truck, \$55.50, to replace a tire which has been discarded.
South Side Ice Co., 40 W. Second St.; ice, \$30.28.
D. Smithland, Dayton; milk, \$140.73.
Blue Valley Creamery, Blue Valley; merchandise, \$150.00.

No. 174. Sales on account for the day as follows:

Peterson's Confectionery, 1400 W. 12th St.	Ice Cream	\$ 27.50
	Ice	.75
Jenkins Brothers, Maryville	Ice Cream	512.25

No. 175. Cash sales for the day: ice cream, \$553.50; merchandise, \$46.38; ice, \$2.75.

No. 176. Deposited the cash received today (\$977.63) in the First National Bank.

August 15

No. 177. Gave the Lake View Dairy our thirty-day note for \$803.48, with interest at 6%, in payment of Vouchers Nos. 3, 9 and 27.

No. 178. Sales on account for the day as follows:

M. L. Roberts, 218 Highland Ave.	Ice Cream	\$390.00
	Merchandise	16.21
Jenkins Brothers, Maryville	Ice Cream	225.00

No. 179. Cash sales for the day: ice cream, \$110.00.

No. 180. Issued Voucher No. 64 for \$940.35, pay roll to date, distributed as follows: Direct Labor, \$312.60; Indirect Labor, \$225.00; Miscellaneous Expenses, \$138.00; Delivery Expenses, \$142.25; Selling Expenses, \$122.50. Withdrew from the Farmers Trust Company by our Check No. 8 a sufficient amount to pay this pay roll.

No. 181. Deposited the cash received today (\$110.00) in the First National Bank

August 16

No. 182. Received from the First National Bank at Dayton a check for \$1,012.50 in payment for the note sent for collection July 25, with interest from date to August 15, date of collection.

No. 183. Sales on account for the day as follows:

Scott & Lanning, Clinton	Ice Cream	\$181.00
Cox Drug Store, Valley Junction	" "	22.00

No. 184. Issued Check No. 28 for \$48.50 on the First National Bank in payment of Voucher No. 46 less 3% discount as per terms.

No. 185. Cash sales for the day: ice cream, \$110.00.

No. 186. Deposited the cash received today (\$1,122.50) in the Farmers Trust Co.

August 17

No. 187. Issued Vouchers Nos. 65, 66, 67, 68, and 69 for the following bills and invoices:

Western Insurance Co., premiums on policies issued July 10, $600.00, as follows: building and machinery, $300.00; raw materials and finished product, $150.00; office equipment, $60.00; delivery equipment, $90.00.

South Side Ice Co., 40 W. Second St., account; ice, $41.20.

D. Smithland, Dayton, account; milk, $80.35.

Greenwood & Son, 1016 Woodward Ave., 3/10, 2/30, n/60; raw materials, $250.40.

C. B. Ry. Co., freight on raw materials purchased, $12.60. Paid this voucher by Check No. 9 on the Farmers Trust Co.

Debit Prepaid Insurance for the first invoice.

No. 188. Sales on account for the day as follows:

Scott & Lanning, Clinton	Ice Cream	$188.50
M. L. Roberts, 218 Highland Ave.	" "	417.50
	Merchandise	6.50
S. M. Black, Maryville	Ice Cream	220.00
West Side Drug Store, West Side	" "	33.00

No. 189. Accepted from Cooper & Cooper on account their note for $400.00 dated July 5 and due in sixty days with interest at 6% from date. Credit was allowed for the face of the note and the accrued interest.

No. 190. Issued Check No. 10 for $108.00 on the Farmers Trust Company in payment of Voucher No. 51 less 2% discount as per terms.

No. 191. Cash sales for the day: ice cream, $115.00; merchandise, $4.25.

No. 192. Deposited the cash received today ($119.25) in the Farmers Trust Company.

August 19

No. 193. Issued Vouchers Nos. 70 and 71 for the following purchases on account:

Alfalfa Creamery Co., 404 Main St., milk per invoice of the 14th, $260.00; per invoice of the 16th, $339.12; per invoice of the 17th, $160.00.

National Supply Co., 14–18 Harrison Ave., merchandise per invoice of the 14th, $762.50; per invoice of the 15th, $113.50; raw materials per invoice of the 17th, $876.00.

One voucher is issued to each company for the total of the three invoices.

No. 194. Paid Vouchers Nos. 44 and 49 by Check No. 11 for $416.00 on the Farmers Trust Company; Vouchers Nos. 45 and

50 by Check No. 12 for $49.10 and Voucher No. 53 by Check No. 13 for $15.20.

Where two vouchers are made in favor of the same firm, one check may be issued in payment of both. In practice, when it is desired to file the canceled check with each voucher, separate checks would be written.

No. 195. Issued credit memorandums for ice cream returned as follows: M. L. Roberts, $22.00; Cox Drug Store, $11.00; Scott & Lanning, $27.50.

August 20

No. 196. It has been agreed to cancel the $500.00 due on the fourth installment of stock subscribed by G. A. Vanderberg and to issue to him a certificate for fifteen shares, the number for which he has paid.

The explanation of the entry in the general journal should provide information for the stock ledger posting if certificates of stock are not issued.

No. 197. Payment is requested by the Daily News for advertising bill, $212.50, rendered today. Issued Voucher No. 72 for this amount and paid same by Check No. 29 on the First National Bank.

No. 198. Cash sales for the day: ice cream, $275.00; merchandise, $8.65.

No. 199. Deposited the cash received today ($283.65) in the Farmers Trust Company.

August 21

No. 200. Received from S. M. Black to apply on account note for $500.00 signed by him and due in thirty days with interest at 6% from date.

No. 201. Paid George Thomas $2.00 from the petty cash fund for driving a truck part of the day as extra driver.

No. 202. Left the note signed by Charles Smith, received July 3, with the First National Bank for collection

No. 203. Sales on account for the day as follows:

Jenkins Brothers, Maryville	Ice Cream	$450.00
M. L. Roberts, 218 Highland Ave.	" "	357.50
	Merchandise	12.75
Excelsior Candy Co., 902 Locust St.	Ice Cream	22.00

No. 204. Cash sales for the day: ice cream, $88.50.

No. 205. The board of directors has issued a call for the payment of the fourth installment on common stock on August 26.

No. 206. Deposited the cash received today ($88.50) in the Farmers Trust Company.

August 22

No. 207. Accepted from R. H. Blackburn in payment of the last installment on preferred stock purchased by him, his note for $1,000.00 due in thirty days with interest at 6% from date, and his check for $250.00. Issued the stock.

No. 208. Received checks from customers as follows: Jackson Hotel, $37.00; Cline's Restaurant, $300.00; Cooper & Cooper, $51.00; Scott & Lanning, $1,867.15.

No. 209. Issued Vouchers Nos. 73, 74, 75, and 76 for the following purchases on account:

Lake View Dairy, 456 Market St.; milk, $204.00.
Sanitary Creamery Co., 222 Dalton Ave.; milk and eggs, $2,436.25.
South Side Ice Co., 40 W. Second St.; ice, $127.38.
New York Bakery, 2361 Vine St.; merchandise, $97.23.

No. 210. Borrowed from the Farmers Trust Company $5,000.00 on the corporation's note due in ninety days with interest at 6% from date.

Place a check mark in the L. F. column at the left of the entry in the notes payable journal and the entry in the cash receipts journal.

No. 211. Deposited the cash received today ($7,505.15) in the Farmers Trust Company.

August 23

No. 212. J. A. Parker has sold twenty shares of preferred stock to J. A. Anderson and surrendered his Certificate No. 3 with authority to issue the new stock.

No. 213. Sales on account for the day as follows:

American Cafe, 125 Main St.	Ice Cream	$ 22.00
Cooper & Cooper, 721 Broad St.	" "	12.00
Manning Manufacturing Co., 2628 Spring Grove Ave.	" "	275.00
M. L. Roberts, 218 Highland Ave.	" "	345.00
	Merchandise	14.85
	Ice	5.00

No. 214. Issued a credit memorandum to M. L. Roberts for $27.50, value of ice cream returned.

August 24

No. 215. Issued Voucher No. 77 for $16,000.00 in favor of the Holmes Realty Co. for site for proposed power plant. Paid this voucher by Check No. 14 on the Farmers Trust Company for $10,000.00 and Check No. 30 on the First National Bank for $6,000.00.

No. 216. Issued Voucher No. 78 for $20.40 and withdrew from the First National Bank by Check No. 31 cash with which to renew the petty cash fund.

No. 217. Issued Vouchers Nos. 79, 80, 81, and 82 for the following purchases on account:

Arctic Ice Co., 192 First St.; ice, $28.30.
D. Smithland, Dayton; milk, $87.50.
Foster & Co., 139 Hunt St.; stationery, $93.75.
Conklin Plumbing Co., 800 Mitchell Ave.; repairs on plumbing in factory, $114.27.

No. 218. Sales on account for the day as follows:

S. M. Black, Maryville	Ice Cream	$465.50
Palace Candy Co., 18 W. Sixth St.	" "	28.50
Scott & Lanning, Clinton	" "	275.00
New York Candy Co., 108 Pearl St.	" "	57.50

No. 219. Cash sales for the day: ice cream, $220.00.

No. 220. Accepted from George Rooney, in payment for the last installment on common stock subscribed by him, his check for $1,250.00 and his note for $2,500.00, due in thirty days with interest at 6% from date. Issued the stock.

No. 221. Deposited the cash received today ($1,470.00) in the Farmers Trust Company.

August 26

No. 222. The First National Bank advises collection of the note signed by Charles Smith and left with it for collection August 21. Our account has been credited with $2,512.50, face of the note and interest.

No. 223. Issued Voucher No. 83 in favor of the Midland Creamery Co., Reading, for $348.50, milk purchased on account.

No. 224. Received checks from the following in payment of the last installment of 25% of the stock subscribed:

Common—

M. E. McMahon	$3,750.00	H. G. Booth	$250.00
M. L. Johnson	250.00	G. F. Cooper	175.00
R. W. Boyd	150.00	John Smith	125.00
J. H. Rainsberger	300.00	C. D. Norris	125.00
G. Justus	150.00	George Musselmann	125.00
C. E. Buchanan	100.00	J. R. Davis	375.00

Preferred—

D. O. Conner, Sr.	$ 250.00	D. O. Conner, Jr.	$125.00

Issued certificates to each. C. D. Norris requests that two certificates be issued for his subscription, one to himself for three shares and one to his wife for two shares.

No. 225. Sales on account for the day as follows:

Barnum & Co., W. 71st St.	Ice Cream	$275.00
Stewart & Stewart, 4348 Tower Ave.	" "	440.00
	Merchandise	14.87

No. 226. Cash sales for the day: ice cream, $137.50.

No. 227. Deposited the cash received today ($8,900.00) in the First National Bank.

August 27

No. 228. Issued Check No. 15 for $92.00, Check No. 16 for $140.73, and Check No. 17 for $242.89 on the Farmers Trust Company, in payment for Vouchers Nos. 56, 62, and 68, respectively. Deducted 3% discount as per terms on Voucher No. 68.

No. 229. Issued Voucher No. 84 in favor of J. A. Parker, for fifty shares of his preferred stock at par. Paid this voucher by Check No. 18 on the Farmers Trust Company. Mr. Parker has surrendered his stock certificate and received a new one for his net holdings as shown by his account in the stock ledger.

Debit Treasury Stock Preferred for the amount of the voucher.

No. 230. Paid from the petty cash fund as follows: stamps for use in the selling department, $4.00; pens and pencils, $5.00.

August 28

No. 231. Issued Vouchers Nos. 85 and 86 for the following purchases on account:

South Side Ice Co., 40 W. Second St.; ice, $17.54.

J. C. Ginville Company, 101 Ninth St.; advertising supplies, $87.50.

No. 232. Received checks from customers as follows: Lake View Pharmacy, $206.20; Morgan's, $109.00; Olson's Restaurant, $22.00.

No. 233. M. E. McMahon has sold ten shares of his common stock to W. O. Crosswhite; and D. O. Conner, Sr., has sold five shares of his preferred stock to R. H. Blackburn.

No. 234. Sales on account for the day as follows:

M. L. Roberts, 218 Highland Ave.	Ice Cream	$495.00
Cummins & Co., 95 Delta Ave.	" "	113.50
S. M. Black, Maryville	" "	220.00
	Merchandise	28.50
Jackson Hotel, 345 W. Third St.	Ice Cream	24.00
	Ice	2.00

No. 235. Cash sales for the day: ice cream, $225.50; merchandise, $16.25; ice, $1.50.

No. 236. Deposited the cash received today ($580.45) in the First National Bank.

August 29

No. 237. Received checks from customers as follows: W. E. Mitchell, $63.00; Peterson's Confectionery, $44.75; Castle Hotel, $22.00.

No. 238. Paid from the petty cash fund as follows: special purchase of ice, $4.00; raw materials purchased, $2.50; stamps for office use, $2.00; extra labor in unloading delivery, $2.50.

Debit Delivery Expense for the last payment.

No. 239. Deposited the cash received today ($129.75) in the First National Bank.

August 30

No. 240. Issued Voucher No. 87 for $29.50, traveling expenses of J. W. Jones, an employe in the selling department. Paid this voucher by Check No. 19 on the Farmers Trust Company.

No. 241. Sales on account for the day as follows:

Peterson's Confectionery, 1400 W. 12th St.	Ice Cream	$ 29.00
West Side Drug Store, West Side	" "	52.00
Jenkins Brothers, Maryville	" "	392.50
	Ice	2.50

No. 242. Issued Voucher No. 88 for $2,010.00, amount of 30-day note given the Arctic Ice Co. on July 31 and due today, and interest. Paid this voucher by Check No. 32 on the First National Bank.

No. 243. Cash sales for the day: ice cream, $123.50.

No. 244. Deposited the cash received today ($123.50) in the First National Bank.

August 31

No. 245. Issued Voucher No. 89 for $20.00 and withdrew from the First National Bank by Check No. 33 cash with which to renew the petty cash fund.

No. 246. Paid Voucher No. 71 by Check No. 20 for $1,752.00 on the Farmers Trust Company, and Voucher No. 74 by Check No. 21 for $2,436.25.

No. 247. Sales on account for the day as follows:

Morgan's, 426 W. 4th St.	Ice Cream	$ 24.00
Scott & Lanning, Clinton	" "	330.00
S. M. Black, Maryville	" "	195.00

No. 248. Issued Voucher No. 90 for the following salaries of officers: George Rooney, $400.00; M. E. McMahon, $300.00; H. D. Thompson, $300.00. Paid this voucher by Checks Nos. 34, 35 and 36 on the First National Bank.

INSTRUCTIONS: 1. Prove cash (balance in First National Bank, $14,267.64; balance in Farmers Trust Company, $9,489.75).

2. Foot and rule the books of original entry, and post all entries including the totals of the special columns.

3. Take a Trial Balance of the general ledger.

4. The following adjustments are to be made:

(a) Reserve for Bad Debts, ½ of 1% of Net Sales of ice cream and merchandise.

(b) Depreciation on Fixed Assets: (a) buildings, $450.00; (b) machinery and factory equipment, $800.00; (c) delivery equipment, $186.00; (d) office equipment, $23.29.

(c) Accruals: (a) interest on notes receivable, $9.05; (b) interest on notes payable, $399.14; (c) interest on mortgage payable, $300.00; (d) unpaid pay roll: Direct Labor $312.60, Indirect Labor $225.00, Miscellaneous Expenses $138.00, Delivery Expenses $142.25, Miscellaneous Selling Expenses $122.50.

(d) Inventories: (a) Finished Goods, $1,549.57; (b) Merchandise, $415.25; (c) Raw Materials, $6,759.60.

(e) Deferred Charges: (a) office supplies on hand, $36.27; (b) factory supplies on hand, $12.00; (c) ice on hand, $25.70. There are no sales department supplies or advertising supplies on hand.

(f) Unexpired Insurance: (a) on factory and equipment, $250.00; (b) on raw materials and finished goods, $125.00; (c) on office equipment, $50.00; (d) on delivery equipment, $75.00. The expired insurance on raw materials and finished goods is to be apportioned as follows: raw materials, 77%; finished goods, 23%. (See Transaction No. 187 for premiums paid.)

5. Prepare a Working Sheet, Balance Sheet and Statement of Profit and Loss. A dividend of 2% is declared on preferred stock.

6. Make the journal entries necessary to give effect to the adjustments stated above and post the same.

7. Make the journal entries necessary to close the ledger accounts and post the same.

8. Make the post-closing entries and take a post-closing Trial Balance.

9. Prepare a list of the customers, showing the amount due from each as shown by the accounts receivable ledger, and prove the total by comparing it with the balance of the controlling account in the general ledger.

10. Prepare a list of the unpaid vouchers as shown by the voucher register, and prove the total by comparing it with the balance of the Vouchers Payable account in the general ledger.

11. The total number of gallons of ice cream sold during July and August was 23,009. Ascertain the cost per gallon.

Retain the Statement of Profit and Loss for future use.

CHAPTER XLIX

ANALYSIS OF FINANCIAL STATEMENTS

Basis for Interpretation and Use of Financial Statements

To make possible a correct interpretation and use of financial statements it is necessary:

(1) That the statements be drawn in the proper form with a proper classification of the items which they contain.

(2) That the items appearing on the statements be correctly stated both as to amount and as to title.

(3) That proper comparisons be made to show the present financial condition and the change in financial condition which has taken place during the fiscal period.

Considerable attention has been given in previous chapters to the form of the most widely used financial statements, the Balance Sheet and the Statement of Profit and Loss. Considerable emphasis has also been placed upon the classification of the items which appear on these statements. It will be assumed, therefore, that the student is familiar with the form of these statements. It is the purpose of the present chapter and those immediately following to discuss the information which ordinarily appears on these statements and the method of judging the financial condition of a business by a consideration of this information.

The Balance Sheet

To serve as a basis for this discussion, a Balance Sheet made in the standard form is given in Illustration No. 115.

Current Assets

Cash. The cash item shown on the Balance Sheet usually represents cash on hand and cash on deposit in the bank. By "cash on hand" is meant that in the cash drawer. If cash funds are maintained at the branch offices, the amount of these should be shown as a separate item. Cash on hand should represent currency and checks which have been received and not yet presented for deposit or payment. It should not include dishonored checks, due bills and I. O. U.'s received from employees. The cash in bank should represent funds on deposit which are subject to withdrawal without notice. Time deposits should be shown as a separate item. All outstanding checks should be

THE HARTLEY COMPANY

Balance Sheet as of December 31, 192..

Assets					
CURRENT ASSETS:					
Cash:					
On Hand	200.00				
In Bank	19,805.75	20,005	75		
Notes Receivable		3,250	50		
Accounts Receivable	205,110.50				
Less: Reserve for Bad Debts	5,010.50	200,100			
Inventories		80,215	20		
Accrued Income		3,025	50		
TOTAL CURRENT ASSETS				306,596	95
INVESTMENTS:					
Brown Manufacturing Co., 7% Pfd. Stock		20,000			
U. S. 4% Bonds due 1935		9,000			
TOTAL INVESTMENTS				29,000	
DEFERRED CHARGES TO EXPENSE:					
Prepaid Insurance		809	50		
Unused Supplies		205	50		
TOTAL DEFERRED CHARGES TO EXPENSE				1,015	
FIXED ASSETS:					
Office Equipment	4,150.50				
Less: Reserve for Depreciation	415.05	3,735	45		
Machinery and Equipment	75,110.75				
Less: Depreciation	25,160.25	49,950	50		
Buildings	40,000.00				
Less: Depreciation	1,000.00	39,000			
Land		20,000			
TOTAL FIXED ASSETS				112,685	95
INTANGIBLE ASSETS:					
Goodwill		30,000			
Patents		20,000			
TOTAL INTANGIBLE ASSETS				50,000	
TOTAL ASSETS				499,297	90
Liabilities and Proprietorship					
CURRENT LIABILITIES:					
Notes Payable		71,150	50		
Accounts Payable		42,010	50		
Accrued Liabilities		3,110	60		
TOTAL CURRENT LIABILITIES				116,271	60
FIXED LIABILITIES:					
Bonds Payable				50,000	
PROPRIETORSHIP:					
Capital Stock		200,000			
Reserve for Sinking Fund		40,000			
Surplus		93,026	30		
TOTAL PROPRIETORSHIP				333,026	30
TOTAL LIABILITIES AND PROPRIETORSHIP				499,297	90

Illustration No. 115, Balance Sheet

subtracted in determining the balance on deposit. Although these checks may not have been presented for payment, the funds they represent are no longer available for the use of the issuing company. The cash on hand ordinarily represents only a small per cent of the total cash of the company. All cash received should be deposited daily and only a small amount withdrawn for use as petty cash.

Notes Receivable. The notes received from customers in payment of merchandise should be shown as a separate item from the notes received from any other source. If notes are received from officers and employees or from subsidiary companies, these must be shown separately. If notes have been pledged as collateral for loans, the amount of such notes should be stated by showing them as a separate item. Notes past due should be shown. On a Balance Sheet made for credit purposes, it may be desirable to show the notes past due under a separate classification.

Sometimes notes received from customers are discounted at banks. In this case the company offering the notes for discount is required to endorse them, and thus it becomes contingently liable on these notes. This contingent liability must be shown on the Balance Sheet. When the amount of the notes receivable shown on the Balance Sheet is very small in comparison with the amounts shown on previous Balance Sheets, it is an indication of the probability that notes have been discounted. A careful investigation should be made to determine whether this is the case.

Accounts Receivable. The accounts receivable should be classified to show the accounts:

(a) Due from customers for merchandise.
(b) Due from employees for advances made to them.
(c) Due from subsidiary companies or branches for merchandise shipped to them or for advances made to them.

There are two reasons why this classification is desirable:

(a) If customers do not pay their accounts, collection can usually be secured from them by legal process, while it is usually not expedient to bring legal action against employees or subsidiary companies.
(b) In determining the ratio of accounts receivable outstanding to sales, it is necessary that only accounts receivable arising from sales be used.

Past due accounts should be stated separately from the accounts receivable not yet due. In making the Balance Sheet for credit purposes it may be desirable to classify the current

assets so as to show both past due accounts and past due notes separately from those not yet due. In this case, the current assets may be shown as follows:

CURRENT ASSETS:		
QUICK:		
Cash	....	
Notes Receivable Not Due	....	
Accounts Receivable Not Due	....	
Inventories	....	....
SLOW:		
Notes Receivable Past Due	....	
Accounts Receivable Past Due	....	....
Total Current Assets		....

Business firms sometimes discount their accounts receivable. During the past few years companies have been organized which discount accounts receivable in the same manner in which banks discount notes receivable, and business firms much in need of cash make use of their services. When a firm discounts its accounts receivable, it is contingently liable for their payment in the same manner in which it is contingently liable for the notes discounted. This contingent liability must be shown on the Balance Sheet.

All accounts ascertained to be worthless should be charged off the books and not shown on the Balance Sheet. Adequate provision for probable losses on the remaining accounts should be made by a reserve for bad debts, and the amount of this reserve should be shown on the Balance Sheet as a deduction from accounts receivable.

Inventories. On the Balance Sheet of a trading concern only the item of finished goods will be shown under "Inventory". On the Balance Sheet of a manufacturing concern, there will appear the three items of raw materials, goods in process and finished goods. In connection with all inventories, it is necessary that careful attention be paid to three things: (1) quantity, (2) quality, (3) price.

With reference to quantity, only the commodities to which the business has full and valid title should be included in the inventories. Goods received on consignment should not be included. On the other hand, goods shipped on consignment, but not yet sold, should be included since the title to them is still vested in the consignor.

Only such goods should be included in the inventory as are of such quality that they have some salable value. Goods which have deteriorated to such an extent that they can be no longer offered for sale, or which have become obsolete, should not be

included unless it be at scrap value. The quality of the goods must be considered also in determining the price at which they should be inventoried. Although they may still have some salable value, this may be much below their original value.

All inventories should be valued at cost or market price whichever is the lower. By cost is meant the invoice price plus all expenditures incurred in placing the commodity in a condition to be sold. For example, the freight, drayage and unpacking cost may be added to the invoice price. By market price is meant the present cost to replace the article—not the price at which it may be sold. It may be difficult to determine the market price of goods in process. The proper rule to follow is to determine the cost to replace the goods in their present stage of manufacturing, and if this is less than their present cost, replacement cost should be taken.

It is especially important that the inventories be stated accurately. On the Balance Sheets of many concerns the inventory represents fifty per cent of the current assets. It can easily be seen that if the inventory is stated incorrectly, the financial condition of the firm will be materially affected.

Accrued Income. At the end of the fiscal period, there may be items of accrued income, such as interest on notes receivable due from customers, or interest on bank balances, which should be treated as assets on the Balance Sheet. Since such items are usually due and payable within a relatively short time, they may be shown as current assets.

Investments

Many companies own stocks or bonds of other companies or bonds of the United States Government. Although such stocks or bonds may be readily salable, it is usually not the intention of the company to sell them in the near future. It is better, therefore, to exclude them from current assets and to show them under the separate heading of "investments" or "securities." Sometimes notes held against officers of the company or subsidiary companies are included under this heading instead of being shown under current assets. If it is not the intention of the company to collect such notes within the near future, this procedure is desirable.

Stocks and bonds should be shown on the Balance Sheet at cost unless the present market value is below the cost price. In this case, they may be marked down to market value or a reserve may be set up for the difference between the cost and market price. In case of a slight fluctuation between the cost and market value, the investments may be shown at cost and the market price shown in brackets immediately after the title of the investment. To illustrate, if the preferred stock of the Braun Manu-

facturing Company which cost $20,000.00 has a market value of $21,000.00, this may be shown on the Balance Sheet as follows:

INVESTMENTS:	
Braun Manufacturing Co., Preferred Stock, [market value, $21,000].	$20,000

Deferred Charges to Expense

Deferred charges to expense represent expenses paid during the current or preceding periods for services or supplies which will not be used until succeeding periods. Prepaid insurance, taxes and interest are the most frequent examples of such charges. Inventories of supplies which are not to be sold but are to be used in the operation of the business may well be included under this heading.

Fixed Assets

Furniture and Fixtures. Under this heading is shown the equipment used in the operation of the offices of the various departments of a business. Care should be taken to see that it is shown at cost with proper allowance made for depreciation. All repairs incurred in connection with such equipment should be charged as an expense of the period when made and should not be charged to the asset.

Machinery and Equipment. Machinery and equipment should be shown at cost less accrued depreciation. All repairs incurred on machinery and equipment should be treated as an expense of the period when made. Care must be taken to see that any mortgages or liens which may be outstanding against machinery or equipment are properly recorded as liabilities.

Buildings. The value of the buildings owned by a business should be shown separately from the value of the land on which they are situated. The buildings are subject to depreciation, require repairs, and should be protected by insurance. The land is not subject to depreciation, requires no repairs, and, not being subject to destruction, need not be insured. If the buildings are shown as a separate item, it facilitates the determination of the adequacy of the depreciation allowed, the repairs made, and the insurance carried.

Only the buildings to which a business has title should appear on its Balance Sheet. If mortgages are outstanding against the buildings, or bonds have been issued for which the building serves as security, these facts should be clearly shown on the financial reports. The buildings should be shown at cost less accrued depreciation. Increases in the value of the buildings due to market conditions should not be reflected in the accounts or on the financial statements except under unusual circumstances. As in the case of all other fixed assets, the repairs to buildings should be treated as an expense of the period in which they are made.

Land. Only the land to which a business has title should be shown on its Balance Sheet. Land is ordinarily not subject to depreciation. In some cases its value may be decreased because of market conditions, and it may be desirable to reflect this decrease in value in the accounts. Increase in value due to market conditions should be shown in the accounts only under exceptional conditions.

Intangible Assets

The intangible assets of most frequent occurrence are goodwill and patents. Sometimes goodwill is shown as one of the fixed assets, but it is preferable that it be shown under a separate heading. Patents are also shown as fixed assets on some Balance Sheets, but it is preferable that they be shown separately. Fixed assets, such as land and buildings, are subject to more or less accurate valuation, while it is very difficult to obtain the value of such intangible assets as goodwill and patents. It is desirable, therefore, that the latter be shown separately from the fixed assets so that all who read the Balance Sheet can see the values placed on the intangible assets.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

"It is the purpose of the Balance Sheet to show the financial condition of the business as of a certain date, and it is the purpose of the Statement of Profit and Loss to show the result of the operations of the business for a certain period of time." Explain what is required if these statements are to accomplish these purposes.

— 2 —

The Balance Sheet of the Jones Manufacturing Company shows the following items:

Cash on Hand	$2,649.75
Cash in Bank	955.30

Does this represent a normal condition? What reasons can you give as a probable cause of this condition?

3 —

The Balance Sheet of the Beaver Construction Company shows:

Cash in Bank	$8,562.45
Petty Cash	23.81

From the appearance of these items can you explain the method which this company employs in the handling of petty cash?

— 4 —

The Balance Sheet of the Western Manufacturing Company shows the item "Cash—$16,651.45." An examination shows that this item includes the following:

a. Checks received from customers which have been returned as "dishonored"	$ 851.25
b. I. O. U.'s of employes	300.00
c. Stamps held in the cash drawer	31.06
d. Notes of customers due but not yet presented for payment	800.00
e. Currency in cash drawer	25.83
f. Cash in the hands of branches which is held by them permanently as working funds	2,000.00
g. Cash in the bank for which checks have been issued but not yet presented	8,457.96

Explain how you would show these items on the Balance Sheet.

— 5 —

The Baker Manufacturing Company has discounted $5,000.00 of notes of customers at its local bank. Explain how these should be shown on the Balance Sheet of the company.

— 6 —

Explain and illustrate the method of classifying accounts receivable on the Balance Sheet.

— 7 —

An analysis of the accounts receivable of the Bleeker Milling Company shows the following result:

Accounts Receivable, not yet due	$11,876.50
Accounts Receivable, 30 days past due	3,354.95
Accounts Receivable, 60 days past due	2,679.40
Accounts Receivable, 90 days past due	1,228.78

(a) Explain how you would show the accounts receivable of the company on its Balance Sheet. (b) Of what significance is the classification of the accounts to show the length of time past due?

— 8 —

An examination of the stock in the workrooms of the Plimpton Press shows the following:

a.	Paper and ink to be used for printing purposes	$42,905.73
b.	Books in process of manufacture	21,679.46
c.	Books completed, but not yet invoiced to customers	12,304.28
d.	Books invoiced to customers but not yet paid for by them	6,295.37
e.	Books invoiced to customers for which payment has been received	8,036.60

Explain how these various items would be treated in the accounts and on the financial reports of the company.

— 9 —

An examination of the records of the Chicago Wholesale Company shows the following:

a.	Merchandise on hand for which invoices have not yet been received	$2,254.93
b.	Orders received from customers for future delivery but which have not yet been filled	4,745.92
c.	Merchandise for which the company has been billed, but which has not been received by it	1,368.46
d.	Merchandise sold and paid for, but held for later delivery at the request of the purchaser	1,593.78

Explain how you would treat each of these items in preparing the inventory for this company.

— 10 —

An examination of the inventory of the Wilmer Manufacturing Company shows numerous articles which have been on hand for a number of years and of which no sales have been made for the past two years. Explain how these articles should be valued in taking the inventory.

— 11 —

In the inventory of this company there are found some articles which cost \$2.00 to manufacture, but which can now be produced at \$1.80. There are other items which cost \$2.00 to manufacture, but which it would now cost \$2.25 to produce. Explain how these items should be shown on the Balance Sheet of the company.

— 12 —

(a) Explain the importance of accrued income and its classification in drawing up a Balance Sheet. (b) In connection with what assets would you expect accrued income to arise?

— 13 —

The Stone Manufacturing Company owns bonds which cost \$100.00 each. Their present market value is \$98.00 each. How would you show these bonds on the Balance Sheet of the company?

— 14 —

O. O. Lahman shows on the Balance Sheet of his company the following item: Land and Buildings, \$15,000.00. This represents the cost of the property in which he conducts his business when it was purchased five years ago. Explain how you would change this item on the Balance Sheet.

— 15 —

The Dodge Steel Company shows on its Balance Sheet the following item: Land, \$19,000.00.

Investigation shows that this represents land purchased for \$44,000.00 against which a mortgage of \$25,000.00 is outstanding. What changes would you suggest?

— 16 —

What is the preferable method of showing such items as Patents and Goodwill on the Balance Sheet?

LABORATORY MATERIAL

Exercise No. 195

You are requested by the Belding Manufacturing Company to prepare a classification of accounts to be maintained by the company. After a thorough study of its organization and operations, you prepare a classification of accounts for its use. The following are the assets accounts you recommend:

Asset Accounts

Current Assets

First National Bank
Petty Cash
Notes Receivable—Customers
Notes Receivable—Employes
Accounts Receivable
Raw Materials (Inventory)
Goods in Process (Inventory)
Finished Goods (Inventory)
Accrued Income

Investments

Bachrach Manufacturing Company—Preferred Stock
United States Liberty Bonds

Deferred Charges to Expense

Unexpired Insurance
Prepaid Interest on Notes Payable
Organization Expense

Fixed Assets

Furniture and Fixtures
Reserve for Depreciation of Furniture and Fixtures
Machinery and Equipment
Reserve for Depreciation of Machinery and Equipment
Buildings
Reserve for Depreciation of Buildings
Land

Intangible Assets

Goodwill
Patents

INSTRUCTIONS: Write a report to the Belding Manufacturing Company explaining the purpose of each of the asset accounts given in the classification, and state the operation of the account with sufficient clearness to enable the bookkeeping employes of the company to operate it properly.

Exercise No. 196

The Trial Balance of the Modern Manufacturing Company taken as of December 31, 1926, is as follows:

MODERN MANUFACTURING COMPANY

TRIAL BALANCE, DECEMBER 31, 1926

Cash on Hand	100			
Accounts Receivable	50,456	33		
Stock on Hand, December 31, 1925	39,051	65		
Loans to A. B. Short, Partner	14,300			
Plant and Machinery	70,000			
Bank Overdraft			2,000	
Creditors			16,192	80
A. B. Short, Capital			80,000	
B. C. Long, Capital			40,000	
Sales			192,306	75
Discounts and Allowances	2,552	75		
Purchases	76,104	90		
Freight In	3,142	85		
Labor	48,273	70		
Rents and Taxes	7,000			
Insurance (one year from July 1,1926)	2,312	60		
Fuel	6,307	50		
Administrative Salaries	6,000			
Traveling Expenses	2,986	23		
Stationery and Printing	2,491	58		
General Expenses	1,212	26		
Rent of Factory Building			3,000	
Interest Cost	1,207	20		
	333,499	55	333,499	55

The following information is obtained:

(1) Stock on hand, December 31, 1926, $46,000.00.

(2) Estimated depreciation on plant and machinery, 10%.

(3) Estimated loss on bad debts, 1% of sales.

(4) No accruals are to be taken into account.

(5) Rents, taxes and insurance are to be considered two-thirds manufacturing expense and one-third operating expense.

(6) Profits are to be distributed two-thirds to Short and one-third to Long.

INSTRUCTIONS: Prepare a Balance Sheet and a Statement of Profit and Loss as of December 31, 1926.

CHAPTER L

ANALYSIS OF FINANCIAL STATEMENTS—Continued

Notes Payable

Notes payable should be classified to show the notes (a) due to merchandise creditors; (b) due to banks; (c) due to note brokers; (d) due to others.

This classification is desirable because it indicates the method by which a business finances its operations. In many lines of business a large item of notes due to creditors is not desirable, since this may indicate the issuance of notes in payment of overdue accounts; but in those lines of business in which it is customary to issue notes in payment of merchandise, it is expected that the Balance Sheet will show a large item of notes issued to merchandise creditors. Nearly all business firms borrow from banks to some extent. When a liberal rate of discount is offered on purchases, it is often profitable to borrow from the bank and take advantage of the discount. A large number of notes due to banks with a small corresponding amount of notes due to creditors may indicate sound financing.

During recent years many firms have sold notes to note brokers. Banks formerly looked with disfavor on this procedure since they thought their customers should borrow from them. During recent years they have come to regard this practice with greater favor, due, probably, to the fact that the note brokers borrow from the banks the funds they use in carrying on their business, and, consequently, the banks do not lose because of the fact that their customers borrow from the note brokers.

Notes issued to officers of the company may indicate that the business has some difficulty in obtaining funds and that the officers have been forced to come to its rescue. In any case, it is desirable that the amount of such notes be shown separately.

Accounts Payable

Accounts payable should be classified to show the accounts: (a) due to merchandise creditors; (b) due to others.

This classification is useful, for a firm is not expected to incur liabilities to others than merchandise creditors except under

unusual circumstances and consequently the amount of such liabilities is significant. If any of the accounts payable are secured by the pledging of assets as collateral, this should be shown on the Balance Sheet.

Accrued Liabilities

Accrued liabilities may arise because of wages, interest and similar items which are accrued, but not yet due. Of recent years accrued taxes are an item of considerable importance which must be shown as a liability. Since these items need to be paid within the near future, they should be shown as current liabilities.

Bonds Payable

Bonds payable should be shown as a liability and not as a deduction from the asset on which they are a lien. Some businesses subtract the bonds payable from the asset which serves as a security for them and show the equity as an asset. This method does not show the true financial condition of the business. When serial bonds are issued, which provide for the payment of a certain amount each year, the amount falling due within the year should be shown as a separate item.

Mortgages Payable

Mortgages payable, like bonds payable, should be shown as a liability and not as a deduction from the asset on which they are a lien. It is well to indicate on the Balance Sheet the particular assets which serve as security for the mortgages payable. It is also well to show the date of maturity.

Contingent Liabilities

Full information should be shown on the Balance Sheet with reference to all contingent liabilities. Such contingent liabilities may arise because of the notes receivable discounted, accounts receivable sold, or suits pending which may result in a judgment against the firm. Where there is a considerable probability of an adverse decision of the pending suit, it is desirable that a reserve be set up to provide for the liability arising from this decision. Contingent liabilities may be shown by means of footnotes which explain their nature, or they may be shown among the liabilities with their amount shown short and not extended in the amount column.

Capital

The capital of a corporation may be represented by three items:

(a) The capital stock outstanding.
(b) The accumulated surplus.
(c) Reserves which represent appropriated surplus.

Sufficient discussion has been given in previous chapters with reference to capital stock and surplus. It is necessary to give a brief discussion of the reserves which may appear on the Balance Sheet and to explain the kind of reserves which may be considered as a part of the capital or proprietorship.

Reserves

On the Balance Sheets of corporations three kinds of items will be found under the title of reserves:

(1) There are shown "reserves" for taxes and similar items which are not reserves in the proper sense and should be termed accrued liabilities and shown under current liabilities.

(2) There are reserves which represent the estimated decrease in the value of assets, such as reserves for depreciation and reserves for bad debts. These should be shown as deductions from the assets to which they pertain. These reserves may properly be called *valuation* reserves, since they are used in determining the value of certain assets.

(3) There are reserves which represent surplus that has been set aside for a certain length of time for a particular purpose and which will later be carried back into the Surplus account. Since these reserves will later be carried back to Surplus, they may be considered as a part of the surplus, and therefore a part of the proprietorship of the business. The reserve of this kind which is of the most frequent occurrence is the Reserve for Sinking Fund. To illustrate its operation, a typical case may be taken:

The XY Corporation issues $20,000.00 in bonds, payable in twenty years, with a provision that $1,000.00 shall be carried to Reserve for Sinking Fund each year. At the time the bonds are issued the following entry will be made:

	Cash	20,000	
	Bonds Payable		20,000
	To record the sale of bonds for cash.		

At the end of each year the following entry will be made:

Profit and Loss	1,000	
Reserve for Sinking Fund		1,000
To record the annual credit to sinking fund in accordance with the terms of the mortgage.		

At the end of twenty years, the Bonds Payable Account and the Reserve for Sinking Fund will appear as follows:

BONDS PAYABLE

						192 Dec.	31	Balance	√	20,000

RESERVE FOR SINKING FUND

						192 Dec.	31	Balance	√	20,000

When the bonds are paid, the following entry will be made:

Bonds Payable	20,000	
Cash		20,000
To record the payment of 6% bonds issued		

Since the bonds are now paid, there is no further use of the reserve for sinking fund, and the $20,000.00 shown in the Reserve for Sinking Fund account will be carried to the Surplus account by the following entry:

Reserve for Sinking Fund	20,000	
Surplus		20,000
To record the transfer of the reserve for sinking fund to surplus.		

Since the Reserve for Sinking Fund eventually goes back into Surplus, the balance of this account throughout the twenty years may be regarded as appropriated surplus and shown as part of the net worth of the business. Other reserves which are of the same nature as the Reserve for Sinking Fund are "Reserve for Contingencies" and "Reserve for Additions."

The distinction between a *proprietorship* reserve, such as the Reserve for Sinking Fund, and a *valuation* reserve, such as the Reserve for Depreciation of Machinery, can be seen by a comparison of the foregoing illustration with the following:

Machinery costing $11,000.00 is estimated to have a life of ten years and a scrap value of $1,000.00. It is decided to use the straight line method of depreciation and write off $1,000.00 a year. When the machinery is purchased the following entry will be made:

Machinery	11,000	
Accounts Payable		11,000
To record the purchase of machinery for Departments A and B.		

At the end of each year the following entry will be made:

	Manufacturing Expense............	1,000	
	Reserve for Dep. of Machinery....		1,000
	To record the yearly charge for depreciation.		

At the end of the ten years the Machinery account and the Reserve for Depreciation of Machinery account will appear as follows:

MACHINERY

192 Dec.	31	Balance	√		11,000						

RESERVE FOR DEPRECIATION OF MACHINERY

						192 Dec.	31	Balance	√		10,000

If the machinery is sold at the end of the ten years at its estimated scrap value, the following entry will be made:

	Accounts Receivable................	1,000	
	Reserve for Depreciation of Machinery	10,000	
	Machinery......................		11,000
	To record the sale of machinery at scrap value.		

The last entry will close the Machinery account and the Reserve for Depreciation of Machinery account. When the machinery is disposed of, the reserve account also disappears. Its purpose during the life of the machinery was only to record the estimated decrease of its value. The proper method of showing it on the Balance Sheet, therefore, is as a deduction from the balance of the Machinery account.

The Statement of Profit and Loss

The information shown on the Statement of Profit and Loss is usually classified under the following heads·

1. Sales.
2. Cost of Goods Sold.
3. Operating Expenses.
4. Other Income.
5. Other Expenses.

The information which should be shown under each of these headings will be stated briefly.

Sales

Under this heading should be included the selling price of all the commodities or services to which title has passed to the vendee. There should not be included under this heading goods shipped on consignment or goods for which orders have been received, but to which title has not passed. The test as to whether the title has passed should be whether a legally enforceable claim exists against the vendee for the value of the goods. All goods returned and all allowances made to customers should be deducted from the gross sales to determine the net returns from sales.

Cost of Goods Sold

Under this heading should be shown the cost of the goods which are reported as sales under the preceding heading. By cost, as used in this sense, is meant all expenditures incurred up to the time when the goods are put into condition to be offered for sale. The expenses incurred in making the sale and in delivering the goods to the customer should be shown as selling expenses and not as a part of the cost of the goods sold. One of the principal reasons for this classification is that there is usually one executive who is responsible for the cost of the goods and for placing them at the disposal of the selling department, and there is another executive who is responsible for the selling of the goods and for their delivery to the customer. In order to judge the efficiency of these executives, it is necessary that the expenditures incurred by each should be shown separately. In many cases, separate executives are responsible for the delivery of the goods and for the sale of the goods; in this case, Selling Expense and Delivery Expense should be shown separately so as to better judge the efficiency of these two executives.

Operating Expenses

Under this heading should be shown all the expenses incurred in connection with the selling and administrative functions of the business. Not only the expenses paid, but those also which are accrued should be included. Care must be taken to include among the operating expenses the estimated depreciation on the fixed assets of the business.

The selling and general expenses should be classified in such a way as to place responsibility on the executives of the company who are responsible for their incurrence. The extent to which they must be classified will depend upon the organization of the particular business. In many cases there will be certain miscellaneous items of expense which it will be difficult to put under any proper classification. Such expenses are usually shown under the heading of "Miscellaneous Expense". If this item appears to be unduly large, an analysis should be made to determine the

responsibility for these expenses. It is unwise to use this account as a "dumping ground" for all kinds of expenses.

Other Income

Under this heading will be shown income which is derived from sources other than the regular operations of the business. For example, in a mercantile firm interest on bank balances and notes receivable, and profit arising from the sale of fixed assets, will appear under this heading. Such income is shown separately in order that it may be possible to determine the profit arising from the regular operations of the business independently of the profit secured from miscellaneous sources.

Other Expenses

Under this heading will be shown any expenses incurred other than those which are the result of carrying on the regular operations of the business. Losses arising from fire, expenses incurred in buying the stocks or bonds of other companies, and similar items will appear under this heading. These items of expense should be shown separately from the operating expenses for two reasons:

(1) They are not regular expenses of the business, and, if they are included in the operating expenses, they will prevent accurate comparisons between operating expenses of different periods.

(2) The executives of the business who are responsible for the operating expenses, such as selling expense and general expense, are not ordinarily responsible for the other expenses. Consequently, the inclusion of any items under operating expense which do not relate to this group of expenses will not only confuse the reader of the Statement of Profit and Loss as to the placing of responsibility for the incurrence of these expenses, but will also add to the difficulty of the executives themselves in checking increases in expenses.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The Brake Shoe Corporation owes in notes, according to its Balance Sheet, $3,315.00. No further information is given. Ordinarily is this sufficient information? Why?

— 2 —

(a) Explain the possible items that might be included in the total amount of notes payable. (b) What is the desirable relation of each of the groups of notes to the others?

— 3 —

Explain the possible classification of accounts payable and the reason why this classification is desirable.

— 4 —

The following information appears on the Balance Sheet of the Madison Company:

Notes due merchandise creditors	$ 4,000.00
Notes due to banks	16,250.00
Accounts due merchandise creditors	7,546.60

What does this information indicate with reference to the financial policy of the company?

— 5 —

Why is the fact that accrued liabilities are not yet due not a legitimate reason for omitting such items from the Balance Sheet?

— 6 —

The Balance Sheet of the Carlton Manufacturing Company shows no fixed liabilities. The Statement of Profit and Loss of this company shows the following item:

Interest on Bonds Payable	$900 00

What would you infer from these two statements?

— 7 —

A company has discounted notes receivable at the bank. (a) Of what importance is this to the creditors of the company? (b) In what way will this information be shown on the Balance Sheet?

— 8 —

Explain and illustrate the difference between a *proprietorship* reserve and a *valuation* reserve.

— 9 —

On the Balance Sheet of the Russell Company, the following items appear:

Reserve for Taxes	$ 350.00
Reserve for Loss on Bad Debts	595.45
Reserve for Sinking Fund	12,000.00
Reserve for Depreciation of Buildings	2,512.90

Explain the meaning of each of these items and state how each should be shown on the Balance Sheet.

— 10 —

Explain and illustrate the items which enter into the cost of goods sold in (a) a retail store, (b) a wholesale business, and (c) a manufacturing company.

— 11 —

"The expenses incurred in making a sale and delivering the goods to the customer should be shown as selling expenses and not as a part of the cost of goods sold." Explain why this is true.

— 12 —

On the Statement of Profit and Loss of the Field Retail Store the operating expenses are listed as follows: Salaries, Rent, Depreciation, Heat and Light, Taxes, Interest, Supplies, Insurance, Miscellaneous. Is this a satisfactory classification of expense? In answering, explain the reason for your decision.

LABORATORY MATERIAL

Exercise No. 197

The classification of accounts prepared for the Belding Manufacturing Company contains in addition to the asset accounts, given in Exercise No. 195, the following:

Liability Accounts

Current Liabilities

Notes Payable—Merchandise Creditors
Notes Payable—Banks
Notes Payable—Others
Accounts Payable
Accrued Liabilities

Fixed Liabilities

Mortgages Payable
Bonds Payable

Proprietorship Accounts

Preferred Stock
Common Stock
Reserve for Sinking Fund
Surplus

Income Accounts

Operating Income

Sales

Non-operating Income

Interest on Notes Receivable
Purchases Discount

Expense Accounts

Operating Expenses

Cost of Sales—with appropriate subdivisions
Selling—with appropriate subdivisions
General—with appropriate subdivisions

Non-operating Expenses

Interest Cost
Sales Discount

INSTRUCTIONS: Write a report to the Belding Manufacturing Company explaining the purpose of each of the accounts given in the classification, and state the operation of the account with sufficient clearness to enable the bookkeeping employes of the company to operate it properly. In the report indicate the divisions of the expense accounts which you think desirable.

Exercise No. 198

The Independent Manufacturing Company submits the following Balance Sheet to its bank:

INDEPENDENT MANUFACTURING CO.

BALANCE SHEET, DECEMBER 31, 1926

Assets				
Cash	10,703	80		
Notes Receivable	8,000			
Accounts Receivable	19,570	09		
Inventories	187,017	80		
Stocks and Bonds	40,000			
Unexpired Insurance	846	60		
Organization Expenses	16,000			
Office Equipment	7,500			
Machinery and Equipment	80,000			
Land and Buildings	50,000			
Goodwill and Patents	50,000			
Total Assets			469,638	29
Liabilities and Proprietorship				
Notes Payable	100,000			
Accounts Payable	53,951	42		
Reserve for Taxes	5,000			
Bonds Payable	20,000			
Capital Stock	200,000			
Surplus	90,686	87		
Total Liabilities and Proprietorship			469,638	29

You are requested by the bank to examine the records of the company and make any changes in its Balance Sheet which you think necessary. The examination discloses the following:

(1) *Cash* represents the following:

(a) In the cash drawer: currency, \$255.95; I. O. U.'s of employees, \$150.00; past-due note, \$100.00.

(b) In the hands of branches, \$1,500.00.

(c) In the bank: \$3,000.00 on time deposit, not subject to withdrawal for four months; \$5,697.85 on drawing

account, against which there are outstanding checks amounting to $1,234.30. These checks have been issued in payment of accounts payable, but have not been entered in the accounting records.

(2) *Notes Receivable* represent the following:

(a) Notes of customers not due, $5,000.00.
(b) Notes of customers past due, $2,000.00.
(c) Notes of officers, $1,000.00.

All the notes are non-interest-bearing.

(3) *Accounts Receivable* represent the following:

(a) Accounts of customers not due, $16,453.72.
(b) Accounts of customers past due, $3,116.37.

No reserve has been provided for bad debts. You estimate that a reserve equal to 5% of the outstanding book accounts should be set up.

(4) *Inventories* represent the following:

(a) Raw Materials, $41,223.65.
(b) Goods in Process, $53,059.80.
(c) Finished Goods, $92,734.35.

The finished goods have been valued at selling price instead of cost. The average gross profit of the company is 25%. The raw materials are valued at market price, which is 10% above the cost price. The goods in process have had 5% added to their factory cost for selling and general expenses.

(5) *Stocks and Bonds* represent the following:

(a) Preferred stock of the Acme Manufacturing Company which cost $18,000.00 and which now has a market value of $20,000.00.

(b) Common stock of the Ward Mercantile Company which cost $20,000.00 and now has a market value of $15,000.00.

(6) *Unexpired Insurance* represents the following:

The unexpired portion of five policies of insurance now in force. You find that the unexpired portion has been correctly calculated.

(7) *Organization Expenses* represent the following:

The expenditures incurred in organizing the corporation five years ago. The amount as shown on the Balance Sheet represents the original cost. The amount has not been reduced since the time of the original entry.

(8) *Office Equipment* represents the following:

The original cost of office equipment purchased five years ago. You estimate the yearly depreciation to be 10%.

(9) *Machinery and Equipment* represents the following:

Cost of machinery and equipment purchased during the past five years. You estimate that a reserve for depreciation equal to 60% of its book value should be set up.

(10) *Land and Buildings* represent the following:

(a) Land purchased five years ago at a cost of $20,000.00.

(b) Buildings constructed five years ago at a cost of $20,000.00.

You find that three years ago the land was appraised at $25,000.00 and its value written up to that amount. You also find that $5,000.00 spent in painting and roofing the building during the past year was charged to the Building account. You estimate the depreciation on the buildings to be 5% a year.

(11) *Goodwill and Patents* represent the following:

(a) Patents granted by the National Government to the company on certain machines which it manufactures. The cost of obtaining the patents, including the cost of experimental work, was $1,500.00. One-fifth of the life of the patents has expired. At the time the patents were obtained, they were entered on the books at $20,000.00.

(b) Goodwill of $30,000.00, which was entered on the records six months ago at the direction of the President of the Company.

(12) *Capital Stock* represents the following:

(a) Preferred Stock Authorized, $200,000.00.
(b) Common Stock Authorized, $100,000.00.
(c) Treasury Stock, Preferred, $100,000.00.

(13) *Bonds Payable* represent the following:

Twenty-year 6% bonds issued five years ago and secured by a mortgage on the land and buildings.

(14) *Notes Payable* represent the following:

(a) Notes payable to merchandise creditors, $60,000.00.
(b) Notes payable to banks, $20,000.00.
(c) Notes payable to officers, $20,000.00.

(15) *Accounts Payable* represent the following:

(a) Accounts payable to merchandise creditors, $52,312.72.

(b) Accrued wages, $1,638.70.

(16) *Reserve for Taxes* represents the following:

The state taxes accrued for the year. You estimate that an additional $100.00 should be added to this amount.

(17) *Surplus* represents the following:

(a) Accumulated earnings.

(b) Adjustments made for goodwill, patents and land as explained in the foregoing statements.

INSTRUCTIONS: 1. Prepare a Balance Sheet for the Independent Manufacturing Company, taking into consideration all the information discovered by your investigation.

2. Write a report addressed to the President of the bank, explaining each change you have made and the reason for making it.

CHAPTER LI

ANALYSIS OF FINANCIAL STATEMENTS (Continued)

The Value of Comparisons

To arrive at conclusions concerning financial condition from a consideration of financial reports, it is necessary to make comparisons. Any one item taken by itself has little significance. For example, the item of Cash on the Balance Sheet of the King Manufacturing Company is $20,000.00. This of itself indicates little with reference to the financial condition of the company. If the company does a small volume of business, this may be too large an amount of cash for it to carry and may indicate poor management, especially if the company has interest-bearing obligations outstanding. For a somewhat larger company, this amount may represent a normal cash balance and may indicate proper financial management, especially if it is found to be the average balance of the company. For a very large company, such a cash balance would be much too small and would probably indicate poor management and a precarious financial condition.

To determine the size of the cash balance which the company should carry and hence to judge as to the adequacy of the present balance, it is necessary to ascertain:

(1) The volume of business performed by the company and its immediate needs for cash. This necessitates a consideration of the asset and liability items appearing on the Balance Sheet and the income and expense items appearing on the Statement of Profit and Loss.

(2) The cash balance which has been maintained in the past and the adequacy of this balance. This necessitates a consideration of past financial statements.

The consideration of any other item on the Balance Sheet and Statement of Profit and Loss will involve the same procedure. For example, the net profit for the year, as shown by the Balance Sheet of the King Manufacturing Company, is $400,000.00. The first thought may be that this is a favorable indication; that the company must be in a strong financial condition to earn such a large net profit. Investigation of the Statements of Profit and Loss for the three preceding years may show, however, that the company during these years made an average profit of $800,000.00

a year, and an investigation of the Balance Sheet may show that the outstanding capital stock of the company is $10,000,000.00; hence the yearly profits represent 4% on the stock. After this investigation, it will probably be concluded that the past year has not been a satisfactory one.

Any statistical data, in order to be of the highest significance, must be presented in such a way as to show a comparison or relationship between facts. This applies to the facts shown by the Balance Sheet, and it applies even more to the statistics regarding the operations of the business, shown by the Statement of Profit and Loss. It is the purpose of the present chapter to discuss the most important of the comparisons which can be made in connection with these two financial statements.

Classification of Possible Comparisons

The comparisons which may be made with reference to the Balance Sheet and the Statement of Profit and Loss may be classified as follows:

1. Comparison of one item with another or the Balance Sheet. For example, notes receivable may be compared with accounts receivable.

2. Comparison of an item on one Balance Sheet with the same item on another Balance Sheet. For example, the inventory as shown by the Balance Sheet at the end of one year may be compared with the inventory shown by the Balance Sheet made at the end of the next year. Such comparisons of the same items are usually made by means of a comparative Balance Sheet.

3. Comparison of one item with another on the same Statement of Profit and Loss. To illustrate, the selling expenses for the year may be compared with the sales for the year and the percentage determined.

4. Comparison of an item on one Statement of Profit and Loss with the same item on another Statement of Profit and Loss. To illustrate, the sales of one year as shown by the Statement of Profit and Loss of that year may be compared with the sales of the following year as shown by the Statement of Profit and Loss of that year. Such comparisons are usually made by means of a comparative Statement of Profit and Loss.

5. Comparison of information shown on a comparative Balance Sheet with information shown on a related comparative Statement of Profit and Loss. For example, the increase in inventory as shown by the comparative Balance Sheet may be compared with the increase of sales shown by the comparative Statement of Profit and Loss.

Each of these classes of comparisons will be discussed.

Comparison of Items on a Particular Balance Sheet

That the following discussion may be made concrete, typical financial statements will be used as illustrations. For the discussion of the comparison of items of a Balance Sheet, Illustration No. 116 will be used.

CHICAGO WHOLESALE COMPANY

BALANCE SHEET, DECEMBER 31, 1926

CURRENT ASSETS:			CURRENT LIABILITIES:		
Cash...........	10,215 65		Notes Payable .	130,000	
Notes Rec......	54,000		Accounts Pay. .	50,225 95	
Accounts Rec...	46,107 45				
Mdse. Inv......	269,679 90		Total Current Liabilities...		180,225 95
Total Current Assets.....		380,003	FIXED LIABILITIES:		
FIXED ASSETS:			Mortgages Pay.	30,000	
Land..........	70,000		Bonds Payable.	30,000	
Building.......	42,000				
Equipment.....	11,015 75		Total Fixed Liabilities .		60,000
Total Fixed Assets.....		123,015 75	PROPRIETORSHIP:		
DEFER. CHARGES		6,980 25	Capital Stock..	250,000	
GOODWILL.......		20,000	Surplus........	39,773 05	
			Total Proprietorship		289,773 05
Total Assets..		529,999	Total Liabilities and Proprietorship . .		529,999

Illustration No. 116, Balance Sheet, Chicago Wholesale Company December 31, 1926

All of the financial statements given as illustrations in this chapter will be made as simple as possible so the student will not be confused with details. The important comparisons which may be made with reference to the Balance Sheet shown in Illustration No. 116, are as follows:

1. *Ratio of current liabilities to current assets.* This ratio is exceedingly important since it is from the liquidation of the current assets that the funds must be obtained with which to pay the current liabilities. Since assets often shrink in value and liabilities never do, it is desirable that current assets shall always be materially larger than the current liabilities. Banks for a long time have insisted on a rule-of-thumb ratio of 2 to 1; that is, that the current assets shall be twice as large as the current liabilities. This is not a safe rule to follow arbitrarily since the ratio which should exist between the current assets and current liabilities will vary, depending upon the nature of the business and market and financial conditions. The insistence of bankers in the past upon this ratio indicates, however, their realization that the current assets of the business should always exceed by a considerable margin the current liabilities. As shown by Illus-

tration No. 116, the current assets of the Chicago Wholesale Company amount to $380,003.00, and its current liabilities amount to $180,225.95. The ratio is slightly more than 2 to 1.

2. Ratio of notes receivable to accounts receivable. In most lines of business goods are sold on account, and notes are not received in payment at the time of sale. It is customary, therefore, that the accounts receivable be considerably larger than the notes receivable. If a large item of notes receivable appears on the Balance Sheet of such businesses, it is an indication of the probability that overdue accounts have been settled by means of notes. Such a situation is especially apt to arise in times of financial stringency. There are, of course, some businesses which sell habitually on terms which provide for the taking of notes in payment. In such businesses it is expected that the item Notes Receivable will be larger than the item Accounts Receivable. In the Balance Sheet of the Chicago Wholesale Company, notes receivable are $7,892.55 more than accounts receivable. The terms of sale of this company should be determined in order to decide whether this excess of notes receivable over accounts receivable is justified.

3. The ratio of notes payable to accounts payable. In Illustration No. 116, notes payable are more than two-and-a-half times as large as accounts payable. To determine whether this is a desirable condition, it will be necessary to analyze the notes payable to show whether they have been issued to (a) merchandise creditors; (b) banks or note brokers; or (c) others. If they have been issued to merchandise creditors at the time merchandise is purchased, or if they have been sold to note brokers or issued to banks to obtain funds with which to discount accounts payable, there is no objection to the excess of notes payable over accounts payable. It they have been issued to merchandise creditors in payment of overdue accounts, or have been issued to officers or outsiders to obtain funds because the bank credit of the company is limited, an unfavorable financial condition is indicated.

4. Ratio of owned capital to borrowed capital. The total capital employed in the conduct of the Chicago Wholesale Company amounts to $529,999.00. Of this amount $289,773.05, or a little more than half, is provided by the stockholders of the company. This in itself indicates a satisfactory condition, but it would be of interest to compare this ratio with the same ratio at the end of preceding years to see whether the stockholders are increasing or decreasing their interest in the business. It is a wise and conservative policy for a corporation to use its accumulated profits as a basis for its expansion, and by this method the stockholders of the company gradually increase their equity in the business.

5. *Ratio of capital to fixed assets.* The fixed assets of the Chicago Wholesale Company including Goodwill amount to \$143,015.75, and the capital supplied by the stockholders amounts to \$289,773.05, or a little more than twice the amount of the fixed assets. This comparison taken by itself does not mean a great deal, but if it is made for several years, it shows whether there is a tendency to convert the investment of capital of the stockholders into fixed assets, and thereby rely on the creditors of the company to supply working capital, or whether there is the opposite tendency for the stockholders to supply an increasing amount of the working capital.

The latter tendency is undoubtedly the desirable one. If the stockholders supply a large part of the working capital, the corporation is not likely to be embarrassed in times of financial stringency; whereas, if they must rely at such times upon capital supplied by the creditors of the company, they may be hampered in their operations.

Comparison of Corresponding Items and Ratios on Different Balance Sheets

To interpret better the Balance Sheet of the Chicago Wholesale Company on December 31, 1926, as shown in Illustration No. 116, it will be compared with the Balance Sheet of the same company on December 31, 1925, as shown in Illustration No. 117.

CHICAGO WHOLESALE COMPANY

BALANCE SHEET, DECEMBER 31, 1925

CURRENT ASSETS:			CURRENT LIABILITIES:		
Cash	12,210 45		Notes Payable	20,000	
Notes Rec.	26,000		Accounts Pay.	30,215 50	
Accounts Rec.	50,111 95		Total Current Liabilities		50,215 50
Mdse. Inv.	139,675 75				
Total Current Assets		227,998 15	FIXED LIABILITIES:		
FIXED ASSETS:			Mortgages Pay.	20,000	
Land	60,000		Bonds Payable	20,000	
Building	40,000				
Equipment	10,020 50		Total Fixed Liabilities		40,000
Total Fixed Assets		110,020 50	PROPRIETORSHIP:		
DEFER. CHARGES		5,985 25	Capital Stock	250,000	
GOODWILL		20,000	Surplus	23,788 40	
					273,788 40
Total Assets		364,003 90	Total Liabilities and Proprietorship		364,003 90

Illustration No. 117, Balance Sheet, Chicago Wholesale Company, December 31, 1925

This comparison can be more easily made by showing these two Balance Sheets in comparative form, as illustrated by Illustration No. 118.

CHICAGO WHOLESALE COMPANY

COMPARATIVE BALANCE SHEET, DECEMBER 31, 1925, AND DECEMBER 31, 1926

Assets	1925		1926		Liabilities and Capital:	1925		1926	
Cash	12,210	45	10,215	65	Notes Payable	20,000		130,000	
Notes Receivable	26,000		54,000		Accounts Payable	30,215	50	50,225	95
Accounts Receiv.	50,111	95	46,107	45	Mortgage Payable	20,000		30,000	
Mdse. Inventory	139,675	75	269,679	90	Bonds Payable	20,000		30,000	
Land	60,000		70,000		Capital Stock	250,000		250,000	
Building	40,000		42,000		Surplus	23,788	40	39,773	05
Equipment	10,020	50	11,015	75					
Goodwill	20,000		20,000						
Deferred Charges	5,985	25	6,980	25					
	364,003	90	529,999			364,003	90	529,999	

Illustration No. 118, Comparative Balance Sheet

A comparison may be made with reference to every item shown on a comparative Balance Sheet, and usually some benefit may be derived from this comparison. There are some comparisons, however, which are of especial significance. With reference to the comparative Balance Sheet shown in Illustration No. 118, these comparisons are as follows:

1. The notes receivable for the year 1926 are more than twice as large as in 1925. At the same time, the accounts receivable are smaller in 1926 than in 1925. Unless there has been a change in the terms of sale of the company, these two comparisons indicate an unfavorable condition. An increase in business will cause an increase in both the accounts receivable and notes receivable, but if notes receivable increase and the accounts receivable decrease, there is an indication that sales are being made to customers who are not paying promptly, and are giving notes to obtain extensions of credit. At least the facts shown on this comparative Balance Sheet warrant a careful investigation to ascertain the reason for the condition.

2. Merchandise inventory of December 31, 1926, is almost twice as large as the inventory of December 31, 1925. There may be several reasons for this increase:

(a) There may have been a large increase in the volume of business of the company which has necessitated

an increase in inventory. The comparative Statement of Profit and Loss of the company will have to be consulted to ascertain if this is true.

(b) A large amount of merchandise may have been purchased because of an anticipated increase in price or because of an estimated increase in business within the immediate future. Investigation will show whether this is true.

(c) A large amount of unsalable goods may have been accumulated during the past year, or large inventories may have been purchased because of anticipated sales during the year which failed to materialize. A calculation of the merchandise turnover as shown by the comparative Statement of Profit and Loss will make it possible to determine whether this is true.

3. The Balance Sheet of December 31, 1926, shows an increase in the assets, land, building and office and store equipment over the amount of these assets on the Balance Sheet of December 31, 1925. An increase in the value of fixed assets may arise from the following sources:

(a) Additional assets may be purchased. If the actual or anticipated increase in business warrants such additions, it is proper that they be made.

(b) Repairs to the assets may be charged to the asset accounts instead of being charged to the expense accounts of the year. This procedure is, of course, highly improper since it overstates the assets and understates the expenses for the year.

(c) The assets may be appraised, and, on the basis of this revaluation, their value be increased. It is contrary to conservative accounting and management to show appreciation of fixed assets in the accounts or on the financial reports. Since these assets are not to be sold, but are to be used in the conduct of the business, the increase in their market value does not increase their efficiency, and, therefore, their value to the business is not increased.

A careful inspection should be made to ascertain the cause for the increases in fixed assets as shown on the comparative Balance Sheet of the Chicago Wholesale Company. An analysis of the Surplus account of the company and of the expense accounts for the year will assist in the determination of the cause of these increases.

4. Turning to the liability side of the comparative Balance Sheet, it will be noticed that the notes payable have greatly increased during the year. The amount outstanding on December 31, 1926, is six and one-half times the amount outstanding the year previous. The accounts payable have also increased, but not in proportion. As explained in connection with the Balance Sheet shown in Illustration No. 116, an analysis of the notes payable item to determine to whom the notes have been issued is desirable. If the notes have been issued to banks in order to obtain funds with which to discount merchandise invoices, good financial management is indicated. An inspection of the comparative Statement of Profit and Loss to see whether the purchases discount for the current year is larger than for the previous year will indicate whether this is true. This, however, will not be conclusive evidence and an analysis of the Notes Payable account should be made.

5. The mortgages payable and the bonds payable have both increased during the year. This increase is somewhat more than the increase in fixed assets during the year so that, even if the increase in fixed assets is found to be proper, it is indicated that some additional funds are being secured by means of liens on the fixed assets to use for working capital. Although this procedure may be justified in certain cases, it is usually looked upon with disfavor, since the more desirable method is to have the additional working capital supplied by the stockholders and by earnings.

6. The capital stock of the company has remained stationary during the year and surplus has increased $15,984.65. The increase in surplus looks favorable, but before a final decision can be made with reference to this, it will be necessary to ascertain:

(a) The origin of the increase in surplus. It is important to know whether this has originated from the earnings of the year, or whether it is the result of the writing up of fixed assets, or whether it has been obtained from other sources.

(b) The total earnings for the year should be determined to see what part of these earnings have been retained as surplus. It will also be desirable to ascertain whether the regular dividends have been paid.

7. A final comparison which is of considerable significance is that of the ratio of current assets to current liabilities for the two years. For the year 1926 this ratio is 2.1, while for the year 1925 this ratio is 4.54. It can be seen, therefore, that there is a decided decrease in this ratio. Although the ratio for 1926 does not in itself appear unfavorable, the tendency indicated by the decrease in this ratio during the year is decidedly undesirable. It would seem necessary to ascertain whether the plans for the coming year would maintain the present ratio or whether a continued decrease is probable.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain and illustrate the need of comparative data as a basis for judging the financial condition of a business.

— 2 —

Explain the comparisons which may be made for this purpose. Illustrate each comparison stated.

— 3 —

The Jones Mercantile Company requests a loan of the First National Bank and presents the following Balance Sheet:

THE JONES MERCANTILE COMPANY

BALANCE SHEET, MARCH 31, 192

Assets			*Liabilities and Capital*		
Cash	1,163	40	Notes Payable	18,000	
Accounts Receivable	10,233	65	Accounts Payable	6,105	45
Merchandise Inventory	12,101	50	Capital Stock	16,000	
Fixed Assets	18,000		Surplus	1,393	10
Total Assets	41,498	55	Total Liab. and Capital	41,498	55

Would you advise the bank to grant the loan? Why?

— 4 —

The Balance Sheet of the X Mercantile Store shows the current assets to be twice its current liabilities. The Balance Sheet of the Y Manufacturing Company shows its current assets to be three times its current liabilities. Does this prove that the Y Manufacturing Company is a better credit risk than the X Mercantile Store? Why?

— 5 —

The Balance Sheet of National Harvester Company shows the following items:

Notes Receivable	$27,000.00
Accounts Receivable	9,000.00

Under what conditions will this ratio of notes receivable to accounts receivable be justified and under what conditions will it indicate an undesirable condition?

— 6 —

The Balance Sheet of the Daley Company shows the following:

Notes Payable	$18,000.00
Accounts Payable	6,000.00

Under what conditions will this ratio of notes payable to accounts payable be justified and under what conditions will it indicate an undesirable condition?

— 7 —

The comparative Balance Sheet of the Detroit Wholesale Company shows the following:

	1925	1926
Total Assets	$364,000.00	$530,000.00
Proprietorship	274,000.00	290,000.00

Is a desirable or an undesirable tendency indicated?

— 8 —

The same comparative Balance Sheet shows the following:

	1925	1926
Fixed Assets	$130,000.00	$143,000.00
Proprietorship	274,000.00	290,000.00

Is a desirable or an undesirable tendency indicated?

— 9 —

The comparative Balance Sheet of the Mason Manufacturing Company shows the following:

	1926	1925
Notes Receivable	$28,000.00	$18,000.00
Accounts Receivable	14,000.00	20,000.00

What do these comparisons indicate as a possibility? How would you proceed to determine whether this possibility is actual?

— 10 —

The same comparative Balance Sheet shows the following:

	1926	1925
Merchandise Inventory	$68,000.00	$40,000.00

Explain the possible reasons for the increase in inventory, and state which of these are justified and which are unjustified.

— 11 —

The Balance Sheet of the Mason Manufacturing Company shows a large increase in the book value of the fixed assets during the year. Explain the possible sources of this increase and state in each case your opinion with reference to such an increase.

— 12 —

Under what conditions is an increase in fixed liabilities regarded with favor and under what conditions with disfavor?

— 13 —

In judging the effect of an increase of Surplus as shown by a comparative Balance Sheet, what information is necessary?

LABORATORY MATERIAL

Exercise No. 199

The Balance Sheet of the Taylor Mercantile Company on December 31, 1925, is as follows:

TAYLOR MERCANTILE COMPANY
BALANCE SHEET, DECEMBER 31, 1925

Assets			*Liabilities and Capital*		
Cash	18,468	43	Notes Payable	31,500	
Notes Receivable	39,000		Accounts Payable	44,752	33
Accounts Receivable	75,533	29	Mortgages Payable	30,000	
Merchandise Inventory	212,675	30	Bonds Payable	35,000	
Land	90,000		Capital Stock	375,000	
Building	60,000		Surplus	33,529	57
Office Equipment	15,000				
Deferred Charges to Expense	8,104	88			
Goodwill	31,000				
Total Assets	549,781	90	Total Liab.and Capital	549,781	90

Mr. McMahon, a prospective purchaser of one-half of the capital stock of the company, requests you to state your opinion of the financial condition of the Taylor Mercantile Company as shown by this Balance Sheet. You can not obtain access to the records of the Taylor Mercantile Company because they are maintained in a distant city, but the Vice-President of the company, who is Treasurer and Head of the Accounting Department, agrees to answer any questions which you desire to ask.

INSTRUCTIONS: State in outline form (a) the questions you would ask with reference to each item which appears on the Balance Sheet; (b) the comparisons of items you would make in interpreting the Balance Sheet and what these comparisons indicate on this statement.

Exercise No. 200

Mr. McMahon does not purchase the capital stock of the Taylor Mercantile Company (Exercise No. 199) in 1925 because he thinks the purchase price is too high. In January, 1927, the same stock is offered to Mr. McMahon at a lower price. He submits to you the Balance Sheet of the company, which is shown on page 800.

INSTRUCTIONS: 1. Prepare a comparative Balance Sheet for the Taylor Mercantile Company, using the Balance Sheets given in this exercise and Exercise No. 199.

2. Write a report to Mr. McMahon showing your method of interpreting the comparative Balance Sheet and your opinion of the financial condition of the company as shown by its Balance Sheet. State any additional information you think is necessary to determine properly the advisability of purchasing the stock.

Retain your solution for future use.

TAYLOR MERCANTILE COMPANY

BALANCE SHEET, DECEMBER 31, 1926

Assets			*Liabilities and Capital*		
Cash	15,192	80	Notes Payable	195,000	
Notes Receivable	71,000		Accounts Payable	75,112	95
Accounts Receivable	69,473	22	Mortgages Payable	45,000	
Merchandise Inventory	405,313	76	Bonds Payable	40,000	
Land	105,000		Capital Stock	375,000	
Building	63,000		Surplus	54,849	26
Office Equipment	16,000				
Deferred Charges to Expense	9,982	43			
Goodwill	30,000				
Total Assets	784,962	21	Total Liab. and Capital	784,962	21

(Balance Sheet for Exercise No. 200)

Exercise No. 201

The accounts of the Bolton Manufacturing Company are closed by the bookkeeper of the company on December 31. After all the expenses and income accounts are closed, the Profit and Loss account shows a credit balance of $76,489.20. This is much larger than the normal profit of the company and is larger than the company expected. You are asked to examine the accounts to see if any adjustments are necessary, and to recommend the disposition of the remaining profits. As a result of your examination it is determined:

1. To set up a reserve for depreciation of 10% of the plant and machinery which has a book value of $60,000.00.

2. To write off as uncollectible $1,800.00 of the accounts receivable and to set up a reserve for possible future losses of 2% of the balance of $45,067.35.

3. To provide for a bonus of $7,000.00 to employes.

4. To provide for the dividend on the $50,000.00 6% preferred stock and for a dividend of 15% on the $10,000.00 common stock. The directors meet and declare these dividends before you close the Profit and Loss account. They are to be paid one month later.

5. To carry $5,000.00 to a Reserve for Bond Sinking Fund, in accordance with the provisions of the mortgage under which the bonds of the company are issued.

6. To carry the balance of the Profit and Loss account to the Surplus account.

INSTRUCTIONS: 1. Make the journal entries necessary to comply with these decisions.

2. Explain how each of the accounts set up by these entries will appear on the Balance Sheet.

CHAPTER LII

ANALYSIS OF FINANCIAL STATEMENTS—Concluded

Comparison of Items on a Statement of Profit and Loss

The Statement of Profit and Loss for the Chicago Wholesale Company for the year ending December 31, 1926, is shown in Illustration No. 119. The most important comparisons which may be shown in connection with a single Statement of Profit and Loss are illustrated by the percentages shown on this exhibit. These comparisons are all based on the ratio of the different items shown on the Statement of Profit and Loss to the gross sales. These ratios are of very great importance when taken in connection with the same ratios of previous years, but are of little significance when taken by themselves. This is due to the fact that unless there is some standard by which to judge these ratios, there is no means of knowing whether they are too large or too small.

Comparison of Corresponding Items and Ratios on Different Statements of Profit and Loss

The comparative Statement of Profit and Loss for the Chicago Wholesale Company for the years 1925 and 1926 is shown in Illustration No. 120.

A number of interesting comparisons can be made from this comparative Statement of Profit and Loss. The most significant of these are:

1. Sales have increased 50%. This in itself looks very favorable, but the results of these sales must be considered before a final conclusion is made.

2. For the year 1925, the sales returns and allowances represent 1% of sales. For the year 1926 they represent 2% of sales. This increase probably indicates one of two things:

(a) That poorer service is being given to the customers since they are returning more goods and claiming more allowances; or

(b) New territories are being entered and, in the process of establishing new relations, more liberal privileges are being accorded to customers.

CHICAGO WHOLESALE COMPANY

STATEMENT OF PROFIT AND LOSS, DECEMBER 31, 1926

INCOME FROM SALES:				
Gross Sales			600,422 25	100%
Less Sales Returns and Allowances			12,421 95	2%
Net Sales			588,000 30	98%
COST OF GOODS SOLD:				
Mdse. Inventory January 1		140,952 65		
Purchases		633,137 35		
Mdse. Available for Sale		774,090		
Mdse. Inventory December 31		270,125 50		
Cost of Goods Sold			503,964 50	84%
GROSS PROFIT ON SALES			84,035 80	14%
EXPENSES:				
Selling Expenses:				
Salesmen's Salaries	14,126.98			
Salesmen's Expenses	19,883.02			
Advertising	12,002.20			
Clerk Hire	1,990.80			
Miscellaneous	1,007.25	49,010.25		8%
General Expenses:				
Office Salaries	6,998.75			
Buying Expenses	5,123.69			
Heat and Light	1,879.26			
Clerk Hire	2,725.75			
Telephone and Telegraph	263.50			
Legal Expense	1,000.05	17,991		3%
Total Expenses			67,001 25	11%
NET OPERATING PROFIT			17,034 55	3%
OTHER INCOME:				
Interest on Notes Receivable		195 25		
Purchases Discount		2,372 77		
Total Other Income			2,568 02	0.2%
GROSS INCOME			19,602 57	3.2%
DEDUCTIONS FROM INCOME:				
Interest on Notes Payable		4,007 92		
Interest on Mortgages Payable		1,790		
Interest on Bonds Payable		1,825 75		
Sales Discount		994 25		
Total Deductions from Income			8,617 92	1.4%
NET INCOME			10,984 65	1.8%

Illustration No. 119, Statement of Profit and Loss, Chicago Wholesale Company

CHICAGO WHOLESALE COMPANY

COMPARATIVE STATEMENT OF PROFIT AND LOSS

	1925		1926	
INCOME FROM SALES:				
Gross Sales	400,225	100%	600,422 25	100%
Less Sales Ret. and Allow.	4,226.01	1%	12,421 95	2%
Net Sales	395,998 99	99%	588,000.30	98%
COST OF GOODS SOLD:				
Mdse. Inventory Jan. 1	60,100		140,952 65	
Purchases	414,875 25		633,137 35	
Mdse. Available for Sale	474,975 25		774,090	
Mdse. Inventory Dec. 31	139,986 54		270,125 50	
COST OF GOODS SOLD	334,988 71	84%	503,964 50	84%
GROSS PROFIT ON SALES	61,010 28	15%	84,035 80	14%
EXPENSES:				
Selling Expenses:				
Salesmen's Salaries	8,002 50		14,126 98	
Salesmen's Expenses	9,997 50		19,883 02	
Advertising	5,000		12,002 20	
Clerk Hire	2,050		1,990 80	
Miscellaneous	950 23		1,007 25	
Total Selling Expenses	26,000 23	6%	49,010 25	8%
General Expenses:				
Office Salaries	5,123 65		6,998 75	
Buying Expense	4,892 25		5,123 69	
Heat and Light	1,765 50		1,879 26	
Clerk Hire	2,673 75		2,725 75	
Telephone and Telegraph	150		263 50	
Legal Expense	389 75		1,000 05	
Total General Expenses	14,994 90	4%	17,991	3%
Total Expenses	40,995 13	10%	67,001 25	11%
NET OPER. PROFIT	20,015 15	5%	17,034 55	3%
OTHER INCOME:				
Interest on Notes Receiv.	195 75		195 25	
Purchases Discount	2,784 90		2,372 77	
Total Other Income	2,980 65		2,568 02	0.2%
GROSS INCOME	22,995 80	5.7%	19,602 57	3.2%
DEDUCTIONS FROM INCOME:				
Interest on Notes Payable	998 50		4,007 92	
Interest on Mortgages Pay.	1,197 25		1,790	
Interest on Bonds Payable	1,200		1,825 75	
Sales Discount	9,001 55		994 25	
Total Deductions	12,397 30		8,617 92	1.4%
NET INCOME	10,598 50	2.6%	10,984 65	1.8%

Illustration No. 120, Comparative Statement of Profit and Loss

An analysis should be made of these returns to ascertain the reason for this increase.

3. Gross profit on sales in 1925 is 15.3% of sales, while in 1926 it has decreased to 14%. This indicates that the cost of goods sold has increased more than has the sales price. Examination should be made to ascertain if the plans for the coming year contemplate making provision for the increase in the cost of goods sold as indicated by the comparative Statement of Profit and Loss.

4. Turnover. The merchandise turnover for the year 1925 is 3.35%, while for the year 1926 it has decreased to 2.45%. This shows a decided decrease in the rate of turnover and careful attention should be given to this matter.

5. Ratio of Selling Expenses to Sales. Selling expenses are 6.5% of sales for the year 1925, and are 8.1% in 1926. This shows that though the sales are increasing, it is costing more to secure these sales. By reference to the detailed items, it will be seen that the cause of this increase is the extra cost of salesmen's salaries and expenses and of advertising. These increased expenses may have been incurred to obtain additional business and build up goodwill for the company. It may have been proper to have increased them, but the tendency for such expenses to increase faster than sales increase, is a dangerous one and care should be taken that it does not continue too long.

6. General Expenses. The ratio of general expenses to sales in 1925 is 2.5%, and in 1926 2.2%. This shows a desirable tendency and indicates that the increase in sales has not brought about a proportionate increase in general expenses.

7. Net Operating Profit. The net operating profit for the year is smaller in 1926 than in 1925. This is the most discouraging information shown on the comparative Statement of Profit and Loss. When the sales have increased 50%, it is decidedly unsatisfactory to find that the net profits have decreased. It may be found upon examination that some of the expenses incurred during the current year are expected to result in increased business during the next year. If this is true, there is some excuse for the unprofitable showing during the past year; however, a careful examination should be made to ascertain if this is the situation.

8. Net Income. Although the net operating profit is smaller in 1926 than in 1925, the net income for 1926 is larger than for 1925. At first, this may seem to be encouraging, but, if an examination is made of the items appearing under "other income" and "deductions from income," it will be seen that this is due to the decrease in the sales discounts taken by customers.

In the year 1925 customers took discounts of $9,000.00, while in the year 1926 they took discounts of only $1,000.00. This indicates that sales are being made to customers on less favorable terms, or that the credit department of the business has been lax in making sales to customers who are slow in paying their accounts. As will be explained in a succeeding paragraph, the comparative Balance Sheet indicates that these indications are probably correct.

Omissions

There are some items omitted from the Statement of Profit and Loss for 1925 and 1926, the omission of which is quite significant. The statement shows no charges for repairs on fixed assets, no charges for depreciation on these assets, and no charges for reserve for bad debts. If proper provisions were made for all of these, it is probable that the operating profit for 1926 would be turned into an operating loss.

Relation of Comparative Balance Sheet to Comparative Statement of Profit and Loss

If the comparative Balance Sheet shown in Illustration No. 118 is studied in connection with the comparative Statement of Profit and Loss shown in Illustration No. 120, a number of significant facts are indicated:

1. The comparative Balance Sheet shows that the notes receivable of the concern are increasing and the accounts receivable are decreasing. The comparative Statement of Profit and Loss shows that the discounts taken by customers have greatly decreased. These comparisons bear out the probability indicated by the comparative Balance Sheet of the company that customers are giving notes in settlement of overdue accounts. It is needless to emphasize that this is an undesirable tendency.

2. The comparative Balance Sheet shows a large increase in merchandise inventory and an increase which is much larger proportionately than the increase in sales, as shown by the comparative Statement of Profit and Loss. Whereas the sales have increased 50%, the merchandise inventory has increased almost 100%. The comparative Statement of Profit and Loss shows that the merchandise turnover has greatly decreased. These comparisons indicate that unsalable merchandise is being accumulated and that this has resulted in a large increase in the merchandise inventory.

3. In studying the comparative Balance Sheet, it was pointed out that the increase in the fixed assets of building and office equipment might be due in part to the charging of repairs to the asset accounts. The absence of any charges for repairs on the

Statement of Profit and Loss strengthens the probability that this is true.

4. The fact that no depreciation is shown on the Statement of Profit and Loss indicates that proper provision for depreciation on fixed assets has not been made and this possibility is strengthened by the fact that no provision for depreciation is shown on the Balance Sheet. The depreciation might be omitted from the Balance Sheet and the asset shown net; but, if it is omitted both from the Balance Sheet and the Statement of Profit and Loss, this is evidence that no such provision has been made.

5. Since no charges for anticipated losses on bad debts are shown either on the Statement of Profit and Loss or on the Balance Sheet, it is evident that such provision has not been made. Considering the conditions indicated by the comparison of the notes receivable, accounts receivable, and sales discount items, it is evident that liberal provision should be made for probable losses on notes receivable and accounts receivable.

6. The comparative Balance Sheet shows a very large increase in notes payable. The comparative Statement of Profit and Loss shows that the discounts taken on purchases have decreased during the year. This indicates that the notes have not been issued to obtain funds with which to discount merchandise invoices. As previously stated, an analysis should be made of the notes payable to ascertain to whom they have been issued.

7. The Surplus account shows an increase of $15,984.65 for the year. The Statement of Profit and Loss shows that the net profit for the year is $10,984.65. This seems to indicate that at least $5,000.00, arising from some source other than earnings, has been carried to the Surplus account during the year. In the examination of the comparative Balance Sheet given in Illustration No. 118, it was pointed out that the increase shown in the item of Land should be examined since this might be due to the writing up of the value of the Land with a corresponding credit to Surplus. The fact that the surplus has been increased more than the amount of the net earnings for the year seems to indicate that this may have been done. In any case, an examination should be made to ascertain whether this is true.

Summary

The analysis made of the comparative Balance Sheet and comparative Statement of Profit and Loss of the Chicago Wholesale Company indicates the advantages of comparative statistics. The Balance Sheet of this company for December 31, 1926, and the Statement of Profit and Loss for the year ending on the same date, indicate that the company is in a very good financial con-

dition, although the profit earned for the year is small in comparison to the investment in the company. But when the comparative Balance Sheet and the comparative Statement of Profit and Loss of the company are studied, there are indications that the financial policies and the financial management of the company are far from satisfactory.

It is in connection with such companies as the one whose statements are given in this chapter, that comparisons are of the greatest value. If a company is in a very poor financial condition, this will be indicated by its Balance Sheet alone, or at least by its Balance Sheet studied in connection with the Statement of Profit and Loss. But when the company has been in a prosperous condition and is commencing to pursue policies which are having a detrimental effect upon its financial condition, it is very possible that there may be a failure to detect this fact unless proper comparisons are made. The comparative Balance Sheet, studied in connection with the comparative Statement of Profit and Loss, should indicate such tendencies. Of course, additional information should be obtained to use in checking up the indications shown by the comparative financial reports.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Give the principal ratios which may be shown on the Statement of Profit and Loss as indicated by Illustration No. 119.

— 2 —

Explain why these ratios, when taken by themselves, are of limited use.

— 3 —

The comparative Statement of Profit and Loss of the Anderson Wholesale Company shows the following:

	1926	1925
Sales........................	$300,000.00	$200,000.00

Are these figures of themselves proof of the successful operation of this company?

— 4 —

What additional information would you desire to determine the success of the operations of the year?

— 5 —

The sales returns and allowances of the Anderson Wholesale Company for the year 1925 are 1% of sales and for the year 1926 are 3% of sales. What does this increase indicate?

— 6 —

The comparative Statement of Profit and Loss of the same company shows that the cost of goods sold for the year 1925 is 60% of sales and during the year 1926 it is 70%. Explain what this shows and the probable cause for it.

— 7 —

The merchandise turnover of the company has decreased from 6% in 1925 to 4% in 1926. Explain the possible causes for this decrease.

— 8 —

Explain the effect of this decrease in merchandise turnover on the profits of the company. Explain the steps which may be taken to remedy this situation.

— 9 —

The selling expenses of the Anderson Wholesale Company for the year 1925 are 3% of sales and in 1926 are 6%. Explain the possible reasons for this increase. Does this increase necessarily indicate an undesirable situation?

— 10 —

The comparative Statement of Profit and Loss of the Dodge Steel Company shows a large decrease in sales discounts for the year 1926. State the possible causes for this large decrease. Is this a desirable tendency?

— 11 —

The Statement of Profit and Loss of the Dodge Steel Company does not show provision for depreciation on fixed assets. What effect does this omission have on the financial condition of the business as reflected in the Balance Sheet?

— 12 —

The statement of the company also fails to show any record of repairs on fixed assets. You know that some repairs have been made during the year. How would you expect to find these repairs recorded in the accounts since they are not shown on the Statement of Profit and Loss?

— 13 —

In what way does the comparative Statement of Profit and Loss assist in determining the desirability of an increase of inventory shown by the comparative Balance Sheet?

— 14 —

Explain and illustrate how the comparative Statement of Profit and Loss assists in determining the correctness of the value at which the assets are shown on the comparative Balance Sheet.

— 15 —

Explain how an analysis of the Surplus account, showing the entries made in it during the fiscal period, may be of service in interpreting the financial condition of a business.

LABORATORY MATERIAL

Exercise No. 202

A. M. Chapman, a capitalist, contemplates purchasing the stock of the Hydrex Corporation. The corporation has an authorized capital stock of $200,000.00, divided into 1,000 shares of 6% preferred and 1,000 shares of common. The par value of each share is $100.00. The stock has been offered to Mr. Chapman at $60.00 per share for the preferred and $40.00 per share for the common. You are requested to examine the books of the company and give your opinion as to the value of the stock. You find the following accounts to be correct, covering a period of one year:

THE HYDREX CORPORATION

Trial Balance, September 30, 192

Cash	910	06		
Accounts Receivable	25,642	97		
Merchandise Inventory	29,236	29		
Land and Buildings	75,000			
Delivery Equipment	4,000			
Furniture and Fixtures	2,000			
Goodwill	50,000			
Accounts Payable			42,564	23
Mortgage on Plant			25,000	
Capital Stock			200,000	
Surplus			20,190	42
Sales			260,492	38
Claims and Rebates	8,221	40		
Purchases	325,409	63		
Sales Salaries	7,137	25		
General Office Salaries	8,000			
Repairs	9,365	75		
General Expenses	3,323	68		
	548,247	03	548,247	03

INSTRUCTIONS: 1. Prepare a Balance Sheet and Statement of Profit and Loss, taking into consideration the following:

(a) Inventory at the end of the year, $129,763.95.

(b) Estimated depreciation: (a) Buildings, 30% of present book value of $50,000.00; (b) Furniture and Fixtures, 50% of present book value. This large depreciation is necessary because no depreciation has been allowed for the past six years.

(c) The accounts receivable are classified as follows: good, $15,409.65; doubtful, $4,056.20; bad, $6,177.12. One-half of doubtful accounts are thought to be collectible.

2. Write a report to Mr. Chapman stating your opinion as to the advisability of the purchase of the stock, and giving reasons for your opinion.

Exercise No. 203

After examination of the comparative Balance Sheet of the Taylor Mercantile Company which you prepared in Exercise No. 200, you suggest to Mr. McMahon that it is desirable to obtain a comparative Statement of Profit and Loss of the company that you may study it in connection with the comparative Balance Sheet. In compliance with your suggestion, he obtains the statement shown below.

TAYLOR MERCANTILE COMPANY

COMPARATIVE STATEMENT OF PROFIT AND LOSS FOR YEARS 1925 AND 1926

	1925		1926	
INCOME FROM SALES:				
Gross Sales	618,324	40	899,363	35
Less Sales Returns and Allowances	6,115	95	2,877	29
Net Sales	612,208	45	896,486	06
COST OF GOODS SOLD:				
Beginning Inventory	113,752	38	212,675	30
Purchases	619,369	26	959,025	34
Total Cost of Goods Available for Sale	733,121	64	1,171,700	64
Less Ending Inventory	212,675	30	405,313	76
Cost of Goods Sold	520,446	34	766,386	88
Gross Profit on Sales	91,762	11	130,099	18
OPERATING EXPENSES:				
Selling Expenses:				
Salesmen's Salaries	14,000		20,000	
Salesmen's Expenses	15,489	63	31,046	15
Clerk Hire—Sales Department	3,560		4,294	70
Advertising	8,000		18,000	
Miscellaneous Selling Expenses	1,218	15	1,270	20
Total Selling Expenses	42,267	78	74,611	05
General Expenses:				
Office Salaries	7,500		13,000	
Buyers' Salaries	7,500		7,500	
Clerk Hire—Office	3,915	50	4,156	65
Heat and Light	2,843	55	2,999	30
Telephone and Telegraph	237	72	309	06
Legal Expense	250		1,000	
Total General Expenses	22,246	77	28,965	01
Total Operating Expenses	64,514	55	103,576	06
Net Operating Profit	27,247	56	26,523	12

(*Concluded on page 812*)

TAYLOR MERCANTILE COMPANY

COMPARATIVE STATEMENT OF PROFIT AND LOSS FOR YEARS 1925 AND 1926 (CONCLUDED)

NET OPERATING PROFIT (Brought Forward)	27,247	56	26,523	12
OTHER INCOME:				
Interest on Notes Receivable	512	60	783	38
Discount on Purchases	9,527	33	5,818	25
Total Other Income	10,039	93	6,601	63
Gross Income	37,287	49	33,124	75
DEDUCTIONS FROM INCOME:				
Interest on Notes Payable	1,575		8,145	75
Interest on Mortgages Payable	1,800		2,400	
Interest on Bonds Payable	1,000		1,142	86
Sales Discounts	4,863	40	116	45
Total Deductions from Income	9,238	40	11,805	06
Net Income	28,049	09	21,319	69

INSTRUCTIONS: Write a report to Mr. McMahon stating:

1. All the comparisons you have made: (a) between items contained on the comparative Statement of Profit and Loss; (b) between items on the comparative Balance Sheet and the comparative Statement of Profit and Loss.

2. Your opinion with reference to the financial condition of the company and the desirability of buying one-half of the capital stock at its book value as shown by the Balance Sheet of December 31, 1926.

CHAPTER LIII

THE USE OF STATISTICAL DATA IN BUSINESS MANAGEMENT

The Value of Percentage in Interpreting Data

It has been emphasized in the preceding chapters that the primary purpose of accounting records is to provide statistical data which can be used in solving business problems. Such data are much more useful if some means are provided for measuring them. Without the use of some "measuring stick" it is difficult to draw conclusions from statistical information.

For example, the Statement of Profit and Loss of a company may show that a net profit of $10,000.00 has been earned during the year. From this fact alone it is difficult to judge whether the business has been operated efficiently during the year. Usually the first step taken to form a conclusion concerning this question would be to consult the Statement of Profit and Loss of the preceding year to ascertain whether the profit of the present year is larger or smaller than that of the preceding year. In other words, the standard most frequently used to judge the results of a current period are the results of previous periods.

If the Statement of Profit and Loss of the preceding year shows a net profit of $8,000.00, it may appear on first thought that the results of the current year show an improvement over the preceding year and consequently indicate increased efficiency. If on further examination of the Statement of Profit and Loss for the two years it is ascertained that the sales for last year were $100,000 and the sales for this year were $200,000, the efficiency of the present year's operations may be questioned since the sales have doubled and the net profits have increased only twenty-five per cent.

Comparisons such as this are more easily understood if they are stated in terms of percentages. For example, in this case the net profits for the first year are eight per cent of sales while the net profits for the second year are only five per cent of sales. Since the profits for the second year are three per cent less in proportion to sales than during the first year, it is indicated quite clearly that the tendency is undesirable.

Many comparisons of this kind must be made in interpreting statistical data and they are much more intelligible if they are expressed in percentage form. It is the purpose of this chapter to discuss the method of calculating and expressing some of the percentages most frequently used for this purpose.

Method of Determining Percentages

If percentages are to be of value they must be calculated on the same base. For example, in the illustration given in the preceding paragraphs it was ascertained that the net profits were eight per cent of sales in one year and five per cent of sales in the following year. Consequently a comparison could be made of these rates. If it had been ascertained that the profits for one year were ten per cent of the cost of goods sold and for the next year were eight per cent of the sales, then a comparison could not be made between these ratios, for the percentages were figured on a different base.

There has been some discussion in the last few years concerning the proper method of computing percentages with reference to profits, expenses, etc. Some claim that the cost of the goods sold should be used as the basis for such computation, while others insist that the net sales should be used for this purpose. In many texts on arithmetic the student is taught that cost should be used as the basis for calculating percentages. In business practice the sales price is more frequently used.

During the last few years the National Association of Credit Men, Burroughs Adding Machine Company, Butler Brothers, The National Implement and Vehicle Association, and other organizations have prepared and distributed articles advocating the use of sales as the basis of calculating percentages. It is obvious that either method may be used with accuracy if it is adhered to with consistency. The difficulty in the past has been that many merchants have used sales as a basis of calculating some of their percentages and have used cost of goods sold as the basis for calculating other percentages; consequently they have been led into errors and confusion when they attempted to use the statistics calculated on different bases. This confusion often exists in the minds of bookkeepers as well as business men.

Arguments for Using the Sales Price as the Base for Calculating Percentages

There are some advantages in computing expense and profit percentages on sales rather than on the cost of goods sold. A few years ago the Burroughs Adding Machine Company published a little pamphlet written by Thomas A. Fernley giving

twelve reasons why the percentage of profit should be figured on the selling price and not on the cost.

The reasons stated by Fernley are as follows:

(1) Because the remuneration of salesmen is figured as a percentage of the selling price.

(2) Because the percentage of expense of conducting business is based on the selling price. If you take per cent of profit on cost and per cent of expense on selling price, where are you?

(3) Because mercantile and other taxes are inevitably based on per cent of gross sales.

(4) Because the sales totals are always given in books of record. Cost totals are seldom, if ever, shown.

(5) Because the profit must provide for two items of capital—one the capital invested in merchandise, the other the capital necessary for operating expenses and other expenditures not properly chargeable to the merchandise account. Adequate provision for both of these items is more likely to be made if profit is figured on the selling price.

(6) Because it indicates the correct relation of the gross or net profit to the volume of business.

(7) Because allowances in percentage to customers are always from selling price.

(8) Because no profit is made until a sale is actually effected.

(9) Because nine stores in ten which do not figure on the selling price get mixed somewhere in their figures and do not know whether they are going forward or backward.

(10) Because the big stores figure on selling price.

(11) Because it puts the retailer where a customer will not so likely call him a robber if he learns the percentage of profit. Twenty per cent of a selling price is twenty-five per cent on the cost, but the twenty per cent does not seem as large an amount.

(12) Because if you figure on the selling price you can go to the cash drawer and say that "ten per cent of that money is my profit" instead of having to say that "ten per cent of the cost of the goods which I sold for that money is my profit."

In a book published by Butler Brothers, of Chicago, entitled "The Butler Way System Book", there is the following statement with reference to the use of sales price as the basis of calculating percentages of expense and profit:

"Never, never figure your per cent of profit on cost. Burn this rule into your brain some way so that you will never forget it. It will save you time, it will save you much worry, it will help you increase your net returns. Remember always that your profit comes out of your selling price and not out of the cost. You buy a thing for a dollar and place it in your stock. You buy it so you can gain a profit. Where are you going to gain this profit, out of the dollar, or out of the object itself? It is perfectly obvious you will gain no profit from this article until you sell it. Then you sell it, say, for $1.50; you paid fifty cents less for it. This fifty cents is part of the $1.50 you get for the thing, not part of the dollar you paid for it. The fifty cents represents your gross profit—gross profit on the sale. And since it is the sale that pays the profit, it is obvious that the sale is the logical basis upon which to figure the profit."

Important Considerations in Figuring Percentages

The most important consideration in figuring percentages is that they all be calculated on the same base whether that base be the sales price or cost of goods sold, and that they be figured accurately. Many a merchant goes wrong on the question of figuring his profits not only in his percentage calculations, but also because he uses one base in making some percentages and another base in making other percentages. Although it seems quite easy to one accustomed to making mathematical calculations to figure them accurately, many business men make errors in such calculations.

A few years ago a manufacturer sent out broadcast to retailers of all classes an invitation to solve this problem:

> "An article costs one dollar, wholesale, including freight. What will it have to be sold for to bring a net profit of twelve per cent after allowing eighteen per cent for the cost of doing business?"

About one thousand retailers sent in solutions. The answers varied from $1.12 to $1.60. This illustration indicates that many business men figure their costs and profits incorrectly.

Methods of Calculating Percentages

This problem will be used as a means of illustrating the method of calculating percentages correctly. If the sales price is to be used as the base for calculating percentages, the article

must be sold for \$1.43. The method of obtaining this amount may be shown in tabulated form as follows:

Selling Price		100%
Cost of Doing Business	18%	
Desired Net Profit	12%	
Operating Cost and Profit		30%
Wholesale Cost		70%

The wholesale cost is 100 cents, which is seventy per cent of the selling price. One per cent of the selling price is 1.43 cents $(100 \div 70)$. 100% is 100×1.43 cents or 143 cents or \$1.43.

The above process stated in the form of a rule is as follows:

> "To find the selling price of an article add together the cost of doing business and the desired net profit. Deduct this from 100. Divide the result into the cost price."

If for calculating the profit it is desired to use the cost of the goods sold as the base, the selling price of the article would be \$1.30. This is obtained by adding eighteen per cent of the cost price or 18 cents, and 12 per cent of the cost price or 12 cents to the original cost of 100 cents. This gives 130 cents or \$1.30.

References on Methods of Calculating Percentages

Frank E. Goodman, in an article entitled "The Cost Accounting Fallacy Exposed," published in the *American Paint and Oil Dealer* for June, 1912, presents an argument for the use of the cost of goods sold as a basis for the calculation of percentages.

Arguments for the use of the selling price as the basis can be found in the pamphlet published by the Burroughs Adding Machine Company, to which previous reference has been made; in various pamphlets which have been published by the National Association of Credit Men; in Nystrom's "Economics of Retailing," "The Butler Way System Book," published by Butler Brothers, and in pamphlets published by various business associations.

Important Percentages with Reference to Profits and Expenses

There are many percentages with reference to profits and expenses which are of importance. Some of the most important are the ratio between sales and the cost of goods sold, the ratio between selling expenses and sales, between buying expenses and sales, between delivery expenses in the case of a retail business and sales, between general expenses and sales, between gross profits and sales, and between net profits and sales.

These percentages may be very valuable to a particular company in making comparisons between months or years, between different departments in its own business, and between its own business and other businesses engaged in the same lines, if such statistics are available. For example, it would be quite significant if a particular retail business found that its sales for one year were $100,000.00 and its delivery expenses were $1,000.00, or one per cent, while the next year its sales were $110,000.00 and its cost of delivering goods to customers was $2,200.00, or two per cent. The concern would immediately desire to investigate to find out why the ratio of the delivery expense to sales was twice as much the second year as the first year. It would also be of considerable significance to this business for it to find its delivery expense was two per cent of sales, while the expense of a competitor engaged in the same line in the same city was only one per cent of the sales.

Many other similar comparisons will occur quite readily to the student. Some of the more important of these comparisons which may be stated in terms of percentages are indicated in the accompanying laboratory exercises.

Method of Showing Percentages

Percentages such as those we have been discussing are frequently shown on the Statement of Profit and Loss. They are usually shown in an additional column which usually appears just to the right of the customary columns.

The sales price is treated as one hundred per cent; the cost of goods sold, the gross profits, the various items of expense, and the net profits are indicated as a per cent of the sales. The method of showing percentages in this manner is illustrated in the Statement of Profit and Loss given in Illustration No. 121.[1]

The Meaning and Importance of Turnover

With reference to a particular article or a particular class of goods it may be ascertained that the net profit is five per cent of the sales, but to know this is not sufficient. It must further be ascertained how long a time intervenes between the purchase and sale of an article. If the article remains in stock six months after it is purchased before it is sold, only one-half as much profit will be made as if it were sold in three months after it is purchased. This should be seen readily for in the first case the article could be bought and sold only twice during the year, therefore only ten per cent profit will be made on it; in the second case, the article can be purchased and sold four times during the year, and therefore a twenty per cent profit will be made.

[1]For the sake of brevity the expenses of each class are shown as a total.

JAMES O'CONNOR

STATEMENT OF PROFIT AND LOSS FOR YEAR ENDING DECEMBER 31, 192

						Percent of Sales
INCOME FROM SALES:						
Gross Sales				25,525		100 %
Less Sales Returns				1,456	75	5.7%
Net Sales				24,068	25	94.3%
COST OF GOODS SOLD:						
Inventory, Jan. 1, 192	2,541.76					10. %
Purchases	19,123.54	21,665	30			74.9%
Less Inventory, Dec. 31, 192		3,562	30			14. %
Cost of Goods Sold				18,103		70.9%
Gross Profit on Sales				5,965	25	23.4%
OPERATING EXPENSES:						
Buying Expenses		200				0.8%
Selling Expenses		1,485	25			5.8%
Delivery Expenses		521	62			2 %
General Expenses		1,724	65			6.8%
Total Operating Expenses				3,931	52	15.4%
Net Profit on Sales				2,033	73	8. %
NON-OPERATING INCOME				41	25	0.1%
Gross Income				2,074	98	8.1%
NON-OPERATING EXPENSE				49	98	0.2%
Net Income				2,025		7.9%

Illustration No. 121, Statement of Profit and Loss Showing Percentages

It is quite important for the merchant to ascertain the number of times that an article can be purchased and sold within a year, for this has an important bearing on his profits. The number of times an article can be sold or "turned over" within the year is known as the *turnover*, and the calculation of the number of times it can be purchased and sold during the year is termed the calculation of turnover.

Method of Calculating Turnover

Several methods are used in the calculation of merchandise turnover. There are, in fact, but two methods of calculating turnover accurately. They are as follows:

1. Divide the cost of the goods sold during the year by the cost of the average inventory of the year. For example, a retail store carries on the average a stock of goods the cost price of which is $20,000.00, and makes during the year sales of $100,000.00

on which a gross profit of twenty per cent is made. The cost of goods sold is $80,000.00 and the turnover is four.

In other words, in this store, on an average, the articles sold remain in stock three months after they are purchased before they are sold. Inaccuracies may result from calculating the turnover on all the goods carried in stock. It is more accurate if possible to calculate the turnover for each kind of goods, since the turnover may vary on each kind.

2. Divide the average inventory for the year at sales price into the sales at sales price. For example, if the average inventory at cost is $20,000.00 and the sales for the year are $100,000.00, on which an average gross profit of twenty per cent is made, the sales price of the inventory is $25,000.00, and dividing the total sales of $100,000.00 by $25,000.00, a turnover of four will be obtained.

The same result is obtained by both methods. The method which is most convenient should be used.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The Statement of Profit and Loss of the Brown Department Store shows a net profit of $400,000.00 has been made during the past year. Does this indicate that the year has been an exceedingly prosperous year for this store and does it also indicate that this store has been managed efficiently during the past year?

— 2 —

A further analysis of the operations of the Brown Department Store shows that in Department A profits of $50,000.00 have been made during the year, while in Department B profits of $150,000.00 have been made, in Department C $120,000.00 and in Department D $100,000.00. Can you determine from these figures which department is the most profitable, or which of the departmental managers is the most efficient? Why?

— 3 —

You desire to make a comparison between the gross sales and the net profits of one hundred different firms. You have these firms listed and their gross sales shown in one column and their net profits shown in a second column. Would you be able easily to make a comparison of these items by a statement in this form? In what form may you state the comparison in order to make it more useful?

— 4 —

The Brown Mercantile Company states that its net profits for the past year are ten per cent of gross sales. The Smith Mercantile Company states that its net profits are fifteen per cent of the cost of goods sold. Can you make a proper comparison between the statistics provided by these stores? Why?

— 5 —

The Brown Manufacturing Company asserts that percentages should always be figured on the selling price, while the Smith Mercantile Company argues that percentages should always be based on the cost of goods sold. State which you think is correct and give reasons for your answer.

— 6 —

An article is purchased by the X Company at a cost of $3.00. Assuming that it is desired to obtain a profit of ten per cent and that the cost of doing business for this company is twenty per cent, explain at what price the article must be sold: first, if the cost of the article is used as a basis, and, secondly, if the selling price of the article is used as a basis.

— 7 —

State some of the more important percentages which may be used in judging past results in the making of future plans.

— 8 —

How may percentages with reference to expenses and profits be shown in convenient form?

— 9 —

Explain the meaning and importance of turnover.

— 10 —

Explain and illustrate two methods of calculating turnover.

LABORATORY MATERIAL

Exercise No. 204

THE J. F. PEARCE COMPANY

STATEMENT OF PROFIT AND LOSS FOR YEAR ENDING DECEMBER 31, 192

Income from Sales:					
Gross Sales				145,000	
Less Sales Returns and Allowances				4,000	
Net Sales				141,000	
Cost of Goods Sold:					
Mdse. Inventory January 1, 192		14,079	60		
Purchases	89,246.40				
Add Frt. and Dray. In	14,874.40				
Gross Purchases		104,120	80		
Mdse. Available for Sale		118,200	40		
Mdse. Inventory December 31, 192		18,990	40		
Cost of Goods Sold				99,210	
Gross Profit on Sales				41,790	
Expenses:					
Selling Expenses:					
Salaries of Sales Clerks	4,525.00				
Salaries of Road Men	5,180.00				
Traveling Expenses	7,309.81				
Advertising	6,435.00	23,449	81		
General Expenses:					
Rent	2,000.00				
Office Salaries	5,557.00				
Miscellaneous Expense	1,618.19	9,175	19		
Total Expenses				32,625	
Net Operating Profit				9,165	
Other Income:					
Interest Earned		650			
Purchases Discount		850		1,500	
Gross Income				10,665	
Deductions from Income:					
Interest Cost		100			
Sales Discount		1,000		1,100	
Net Income				9,565	

INSTRUCTIONS: Prepare a Statement of Profit and Loss showing percentages for The J. F. Pearce Company. The gross sales is treated as 100% as in Illustration No. 121.

Exercise No. 205

The Sales and Cost of Sales shown on the Statement of Profit and Loss of the Blaine Mercantile Company for two consecutive years were as follows:

	First Year		Second Year	
Gross Sales...............	110,000.00		138,000.00	
Sales Returns and Allow...	3,600.00		4,600.00	
Net Sales..............		106,400.00		133,400.00
Cost of Goods Sold:				
Inv. at begin. of year....	16,910.80		15,163.40	
Purchases..............	63,891.30		90,056.20	
Freight and Drayage In .	10,663.50		15,172.10	
Mdse. Available for Sale	91,465.60		120,391.70	
Mdse. Inv. at end of year	14,079.60		18,999.20	
Cost of Goods Sold ...		77,386.00		101,392.50
Gross Profit on Sales		29,014.00		32,007.50

INSTRUCTIONS: 1. From the above information, ascertain the rate of turnover for each of the two years.

2. Using the gross sales as 100%, prepare a statement showing percentages for the two years.

Exercise No. 206

Prepare a Statement of Profit and Loss showing percentages for the Superior Ice Cream Co. for the period ending August 31. This statement is to be prepared from the Statement of Profit and Loss which you made in Practice Set IV, Chapter XLVIII.

CHAPTER LIV

THE GRAPHICAL METHOD OF PRESENTING ACCOUNTING FACTS

Need of Additional Forms of Reports

In previous chapters considerable emphasis has been placed on the value of accounting reports to the business manager. Illustrations of such reports have been presented and discussed, and attention has been given to the means to be employed in gathering the data necessary for their preparation.

It is scarcely necessary to point out that the forms of reports previously discussed have been employed only as types of the whole group of accounting reports which may be used as an aid to the business executive. There are many others that are valuable aids to the management, the number and kinds of such reports depending in each case upon the nature and the organization of the business for whose use they are designed. With the growth in size of the typical business unit, and the development of specialization within each, a need has arisen for a greater number of special reports. An example of this is to be found in the reports which show sales analysis. These reports must be prepared in such a way that they will answer the questions which may be asked by the different functional managers. Thus the merchandise man, or purchase manager, might want a report classifying sales by commodities; while the treasurer, whose problem is financial, might desire a report on sales which would classify them by the terms of credit on which the sales were made. Not only are reports of this nature required, but also statements which make comparisons of such facts possible between branches or departments of a business, and as between different periods of time, are often desirable.

Use of Statistical Method

If these reports are to present the executives with the information most desired by them and in the most available form, the accountant will need to call to his aid statistical methods of presentation. The statistical method in its best sense implies the gathering, in the form of figures or numbers, of information needed to answer a certain question or reveal a certain tendency,

and the presentation of this information in such a manner as to indicate the answer or the tendency in the clearest possible way.

Thus if the sales manager of a large wholesale business asks for the ratio between the expenditure incurred in advertising in a certain territory during a certain period and the sales made in that territory during the same period, the answering of this question involves the use of the statistical method. Assuming records are kept which make the desired information available, and that the sales for X territory for November are $72,000.00, while the advertising is $6,000.00, there is more than one way of presenting these facts to the sales manager.

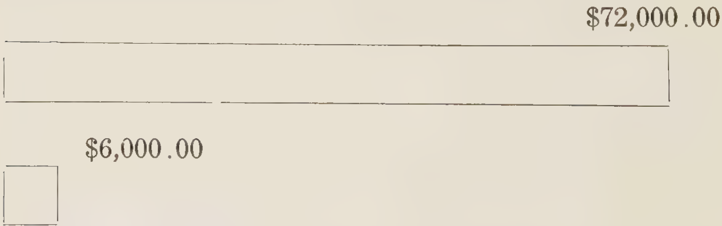
Some possible methods are:

1. Merely a memorandum that $72,000.00 sales were made in X territory during November, with an advertising cost of $6,000.00. This is a simple statement of the facts with no attempt at interpretation. Thus if similar information is furnished for all the sales territories, the significance of the comparisons involved could not be evident without the expenditure of some time and effort in studying the relationships expressed by the figures.

2. To report that sales for November in X territory were twelve times the advertising cost. This is stating the answer in the form of a *ratio* and is more suggestive than the first answer, because a comparison is indicated.

3. To report that advertising expense is 8⅓% of sales. This is not very different from expressing the relation as a ratio, but is preferable because it is easier to understand the meaning of percentages taken on a common basis—in this case sales.

4. By a chart or graph indicating a comparison between the two items. Such a comparison might be expressed by two bars of equal width, their respective lengths picturing the relation between the two items.



This method of presenting statistical information is known as the *graphic* method, and, as will presently appear, is particularly suitable for the presentation of certain types of information.

Further Illustration of Business Statistics

For the purpose of further illustrating the presentation of statistical data concerning business operations, assume that a certain department store keeps records which furnish the following information regarding the operation of each department:

Gross Sales.

Returns and Allowances.

Net Sales.

Cost of Goods Sold.

Sales Salaries.

Advertising.

Delivery Expense.

General Overhead Expense (allocated to the department).

Net Operating Profit.

Assuming further that this information is made available by months, the information concerning a given department for a year may be tabulated in a way to show each of these items for each month in the year, thus making it possible to compare different items for the same month, and also the same items for different months. Such a tabulation for Department "A" might appear as on page 828.

There are several comparisons that may be drawn from the information shown by this tabulation, as well as several ways in which such comparisons may be stated. Thus, for example, if it is reported that sales for January were twenty times advertising expenses, and February thirty-one and one-half times that item, and so on, for each month, comparisons between these two items for each month would be expressed in terms of *ratios*. These ratios could then be compared by months, thus:

RATIO OF SALES TO ADVERTISING EXPENSE,
"A" DEPARTMENT

FOR YEAR ENDING DECEMBER 31, 19.... (BY MONTHS)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
20	$31\frac{1}{2}$	$44\frac{2}{3}$	$25\frac{1}{2}$	26	38	46	24	20	24	$26\frac{1}{5}$	$17\frac{1}{4}$

In the same manner a comparison could be shown between sales and any other item with which comparison may seem desirable.

Another method of comparing different items for the same month is by means of percentages. Thus, taking the figure of Gross Sales as 100%, it is possible to show other items for any

SALES, OPERATING EXPENSES, AND NET OPERATING PROFIT OF DEPARTMENT "A" FOR THE YEAR ENDING DECEMBER 31, 1926, SHOWN BY MONTHS

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Gross Sales	49,400	47,200	43,150	49,600	47,000	45,500	45,400	48,400	50,600	47,800	47,200	54,600	570,850
Cost of Goods Sold	34,250	33,800	31,750	34,500	32,500	31,700	32,000	35,200	33,700	34,200	33,600	35,500	400,700
Gross Profit	15,150	13,400	11,400	15,100	14,500	13,800	13,400	13,200	16,900	13,600	13,600	19,100	173,150
Sales Salaries	3,400	3,100	2,500	3,500	3,200	2,900	2,600	3,000	3,500	2,900	2,700	3,700	37,000
Advertising	2,500	1,500	900	1,750	2,100	1,200	950	2,000	2,500	1,900	1,800	3,400	22,500
Delivery Expenses	450	400	420	500	450	430	390	470	450	470	430	550	5,410
General Overhead Exp.	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	3,100	37,200
Total Operating Exp.	9,450	8,100	6,920	8,850	8,850	7,630	7,040	8,570	9,550	8,370	8,030	10,750	102,210
Net Operating Profit	5,700	5,300	4,480	6,250	5,650	6,170	6,360	4,630	7,350	5,230	5,570	8,350	71,040

The graphic charts shown in Illustrations Nos. 122–128 were prepared from the above figures.

SALES, OPERATING EXPENSES, AND NET OPERATING PROFIT OF DEPARTMENT "B" FOR THE YEAR ENDING DECEMBER 31, 1926, SHOWN BY MONTHS

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Gross Sales	51,100	48,500	45,200	48,000	47,800	47,600	47,150	51,850	52,400	50,200	48,600	56,800	595,200
Cost of Goods Sold	36,000	34,475	32,600	35,000	33,500	33,900	32,000	35,500	36,100	34,100	33,000	38,600	414,775
Gross Profit	15,100	14,025	12,600	13,000	14,300	13,700	15,150	16,350	16,300	16,100	15,600	18,200	180,425
Sales Salaries	3,500	3,300	3,100	3,200	3,250	3,300	3,550	3,600	3,450	3,500	3,480	4,000	41,230
Advertising	2,100	2,000	1,900	2,100	2,100	1,600	1,800	1,500	1,200	1,800	1,700	1,800	21,600
Delivery Expenses	600	500	550	575	550	550	500	600	600	550	500	700	6,775
General Overhead Exp.	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	39,600
Total Operating Exp.	9,500	9,100	8,850	9,175	9,200	8,750	9,150	9,000	8,550	9,150	8,980	9,800	109,205
Net Operating Profit	5,600	4,925	3,750	3,825	5,100	4,950	6,000	7,350	7,750	6,950	6,620	8,400	71,220

The above figures are to be used in connection with the laboratory material at the close of this chapter.

month in terms of the percentage of Gross Sales which they represent. This may be illustrated by taking the three items—Gross Sales, Cost of Goods Sold, and Gross Profit—and comparing them for the first six months. The percentages would appear as follows:

	Jan.	Feb.	Mar.	Apr.	May	June
Gross Sales	100	100	100	100	100	100
Cost of Goods Sold	69.3	71.7	73.6	72.9	69.2	69.6
Gross Profit	30.7	28.3	26.4	27.1	30.8	30.4

If the comparison thus established is considered worth showing, every figure in the table shown on page 828 may be expressed as a percentage of Gross Sales for the appropriate month.

Graphic Method Illustrated

Still another and very useful method of presenting statistical information is by means of charts, curves, or graphs, in such a way as to appeal directly to the eye. This may be illustrated first by the use of the so-called curve. Several types of curves are employed by statisticians, and for different purposes, but the curves used here for illustration will be of a simple type dealing with the same kind of data.

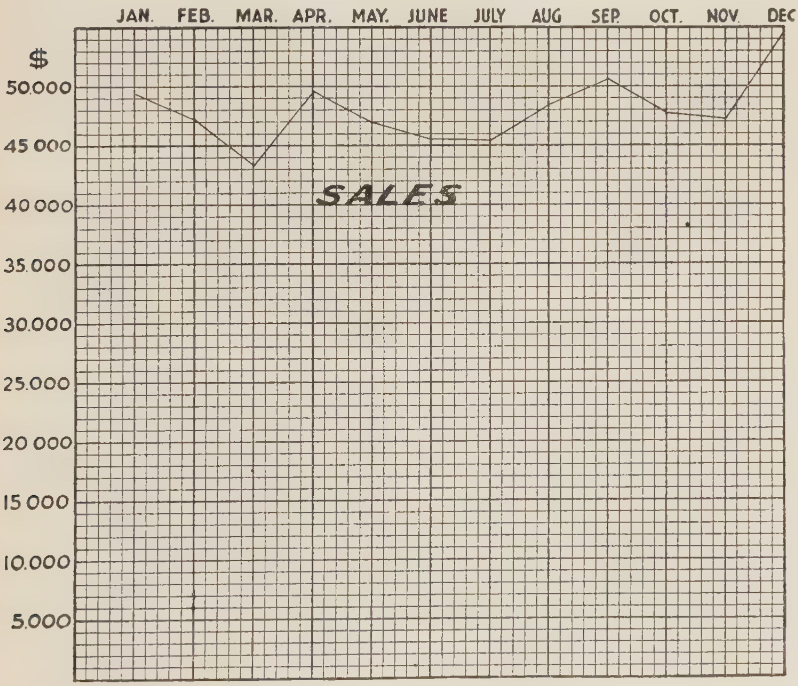


Illustration No. 122, Graphic Chart Showing Gross Sales

Illustration No. 122 shows a curve for the gross sales of Department "A", plotted by months. This curve indicates that sales in the department were high during January and February, low in March, climbing in April, declining from May through July, high during August, higher still in September, after which they fall off somewhat and reach their peak in the holiday season.

This curve, showing the comparison of sales by months for a single year, at once suggests several other interesting comparisons. Thus it would evidently be interesting to see how the sales of the preceding year, plotted by months, on the same basis and on the same scale, would compare with those of the current year. To show such a curve, however, it would be necessary to assume additional data. It will, therefore, be omitted, though with a recognition of its value for purposes of comparison.

Comparison of Sales and Cost of Goods Sold

One significant comparison that can be made on the basis of the data above presented is between the sales by months and the cost of goods sold by months. This is shown by the two

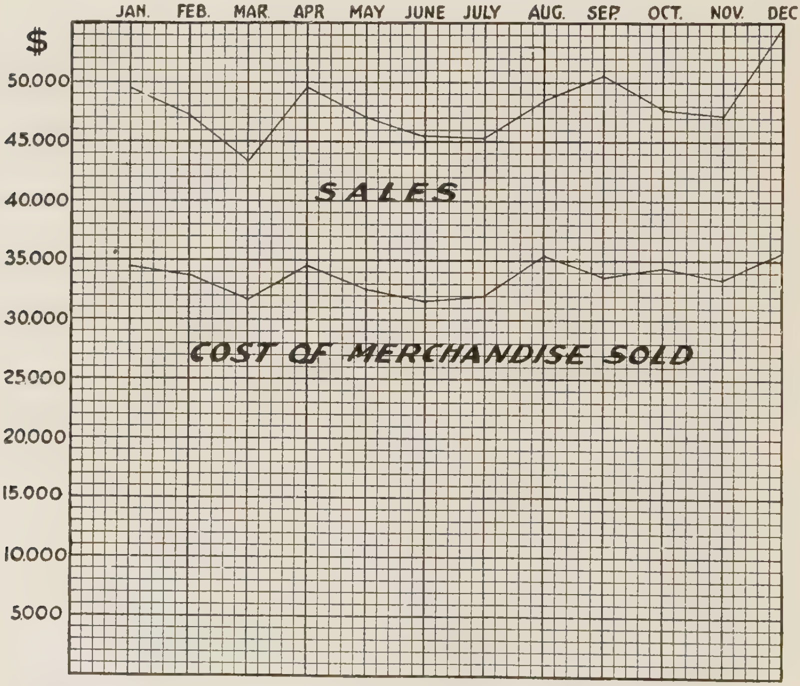


Illustration No. 123, Graphic Chart Showing a Comparison between Gross Sales and Cost of Sales

curves on Illustration No. 123, both of which are plotted on the same basis and on the same scale.

An examination of these two curves shows a tendency toward a fairly close correspondence between the fluctuations of the two curves. However, it is to be seen that the margin between the two items, which measures the gross profit on sales, differs from month to month, not only in amount, but also in its relation to the amount of sales. Thus it is evident at a glance that a higher percentage of gross profit was realized in April, September, and December, than during the other months.

Comparison of Sales and Cost of Advertising

It is altogether probable that the sales manager will desire a comparison between sales and advertising expense, by months. Such a comparison is presented by the two curves drawn in Illustration No. 124.

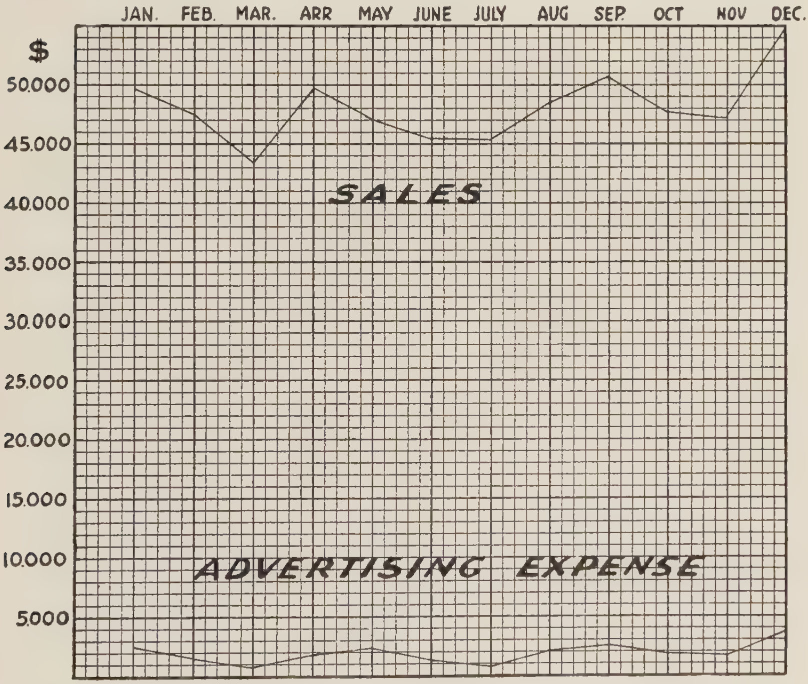


Illustration No. 124, Graphic Chart Showing Comparison between Gross Sales and Advertising Expense

It is at least evident from the chart that advertising expense has not been charged to Department "A" on the basis of sales,

since the fluctuations of the two curves are not always in the same direction. In the main, however, the sales have increased as the advertising has increased, which indicates that the advertising has been quite effective. The exception to this uniformity is found in April, when advertising expense is lower than in May, while sales are higher. This is explained probably by the fact that less advertising was needed in April, since the demand is usually heavier during that month.

Comparison of Sales and Operating Expenses

Illustration No. 125 shows a comparison between gross sales and total operating expense. Inspection of these two curves shows that increased sales have meant increased operating expense, and *vice versa*, but not always in the same proportion. Any questions that may be raised by a study of this chart will require a reference to the table where the analysis of operating expenses by months is shown, and will probably require an investigation that goes considerably further than that.

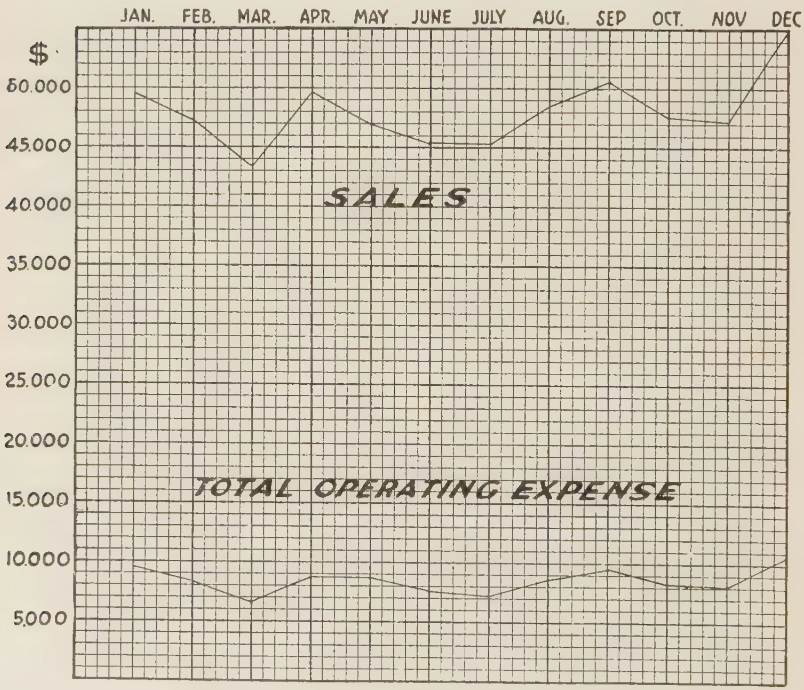


Illustration No. 125, Graphic Chart Showing a Comparison between Gross Sales and Total Operating Expense

Comparison of Sales and Net Operating Profit

The comparison between sales by months and net operating profit by months, as shown in Illustration No. 126, points out the fluctuations in the amount of net profit from month to month to be greater in proportion to the size of the item than are those in the amount of sales. This can be explained by a study of the fluctuations in the items that had to be deducted from sales each month before the net operating profit could be ascertained.

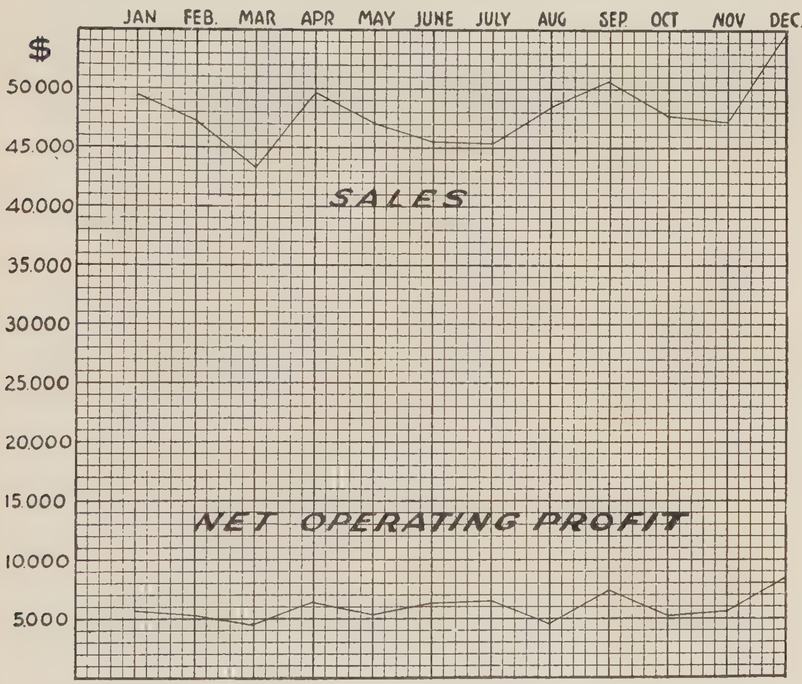


Illustration No. 126, Graphic Chart Showing a Comparison between Gross Sales and Net Operating Profit

Different Methods of Graphic Presentation

Another means of showing a comparison between figures graphically is by bars or rectangles of similar width, whose length furnishes the basis for comparison. A case in which this method might well be employed is found in the comparison of total sales for the current year with total sales for the preceding year. Assuming gross sales for last year to have been $505,500.00, such a comparison is shown in Illustration No. 127 on page 834.

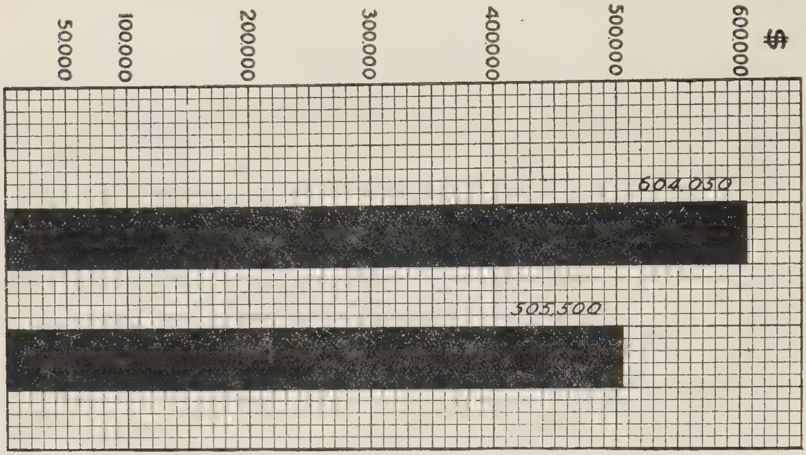


Illustration No. 127, Graphic Chart Showing a Comparison of Sales for Two Years

The rectangle or bar can also be used as a device for showing a comparison of parts with the whole. For example, taking the gross sales for January as a whole and drawing to scale a rectangle whose length represents their amount for that month, this rectangle can in turn be divided off into sections representing the deductions to be made from net sales and the net profit remaining after those deductions have been made. Still another basis for comparison is furnished if rectangles are shown for the other

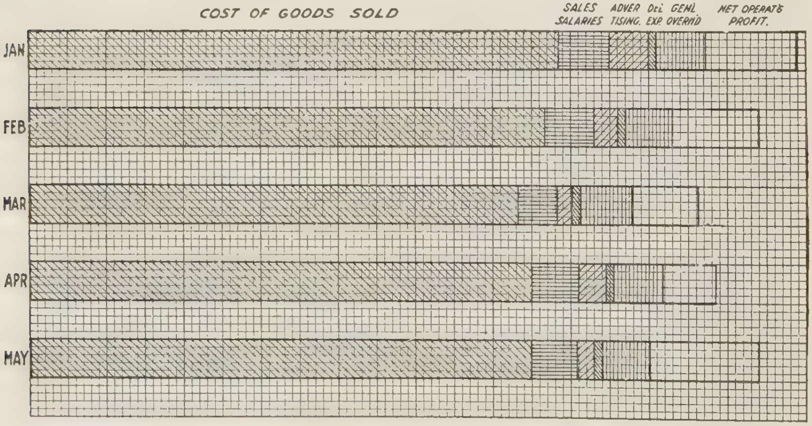


Illustration No. 128, Graphic Chart Showing a Group Comparison

months of the year, drawn to the same scale, and divided up in a similar manner. This use of the rectangle in graphic presentation of facts is shown in Illustration No. 128.

Advantages of the Graphic Method

A few simple illustrations of the graphic method of presenting business statistics have been illustrated and discussed here. Although only a few are given, they are varied enough to be representative, and they serve to reveal certain advantages of this method of presentation. The more obvious advantages may be listed as follows:

(1) The graphic method appeals directly to the eye and is sure to get attention.

(2) It brings out comparisons or tendencies in a more striking manner, and renders the facts shown easier of interpretation than does other methods.

(3) A busy executive can review a much greater amount of information presented in this form in a given time than if this information were reported in other forms.

(4) By the use of curves especially, it is easier to show continuity of certain tendencies over a period of time than it is possible to show by other methods.

Limitations of the Graphic Method

The illustrations of the graphic method shown, have made apparent that this method has certain advantages, but it should also be apparent that there are certain limitations which attach to the use of this method of presenting facts. Some of these are as follows:

(1) Only a very limited range of information can be shown on one chart. (Compare the information presented by any one of the seven charts, or, in fact, all of them, with the amount of information given by the single table of figures upon which they are based.)

(2) While showing very clearly certain tendencies, the chart does not readily furnish exact information which can be stated in terms of definite figures. In other words, a chart can not be quoted. Graphic presentation of facts is usually not sufficient in itself, but needs to be supplemented by figures. Thus in Illustration No. 128 bars are used in showing comparisons, (1) of totals, and (2) of the parts into which such totals may be divided. A little study of this chart will show that if each section of each bar were marked to indi-

cate the number of dollars represented by it, and also the percentage which it is of the whole, it would be more enlightening.

(3) Considerable training and caution are necessary for the proper use of the graphic method:

(a) On the part of the one submitting the report. A variation in the basis, the scale, or the method of comparison may create a very different impression with regard to a given set of facts, and if not wisely and honestly done, may be very misleading.

(b) On the part of the one reading or interpreting the report. If such reports are drawn in a fashion tending to be misleading, they will mislead more than almost any arrangement of the actual figures. Only one trained in the use and interpretation of statistics would know enough to avoid reading a wrong meaning into charts which are carelessly, ignorantly, or dishonestly prepared.

Summary

In rendering reports to interested parties, the accountant should make use of the most scientific methods of presenting information. This means that the successful accountant must have a knowledge of the statistical method. A very useful way of bringing information to the attention of those to whom it is to be reported is by means of graphs or charts, which present the information pictorially or graphically. There are some very evident advantages connected with this method, but it must be used with caution, as it may be very misleading. Where the graphic method of presentation is employed, it should usually be in connection with statistics tabulated or otherwise reported in a way to show the exact quantities involved, thus retaining the good features of each of the methods of reporting.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The vice-president of the Curry Corporation who is in charge of sales, requests the accounting department for a statement of the sales and the advertising expense of Department A during the past year. The accounting department determines that the sales for Department A are $100,000.00 and the advertising expense $10,000.00. Explain and illustrate the different ways in which this information may be stated for the benefit of the vice-president.

— 2 —

Explain and illustrate what is meant by the statistical method.

— 3 —

Illustration No. 122 shows that sales for Department A are the lowest for the year during March. (a) Can you offer any reasons why this is true? (b) Do you think that all departments of the business would show a similar decrease at this time of the year? Would the grocery department, for instance, show as big a decrease in March as the white goods department?

— 4 —

Suggest plans which might serve to eliminate such a big decrease in sales during March as is indicated by Illustration No. 122.

— 5 —

Illustration No. 123 shows that the sales and the cost of goods sold commence to increase July 31, but the cost of goods sold decreases after August 31, while the sales continue to increase until September 30. Explain how this is possible.

— 6 —

Illustration No. 124 shows that sales decreased during May, while the advertising expense increased. How would you explain this?

— 7 —

Illustration No. 125 shows that sales increased much more rapidly than the operating expenses during December. What does this indicate?

— 8 —

Illustration No. 126 shows that net operating profit does not always increase when sales increase. Give reasons why this is true.

— 9 —

Explain and illustrate three methods which may be employed to show accounting facts graphically.

— 10 —

Give the advantages and the disadvantages of the graphic method of presenting accounting statistics.

LABORATORY MATERIAL

Exercise No. 207

On sheets of white paper ruled in the same form as Illustration No. 122, prepare from the figures given for Department B, on page 828, curves to indicate the following:

1. Gross sales.
2. Comparison of sales and cost of goods sold.
3. Comparison of sales and total operating expenses.
4. Comparison of sales and advertising expenses.
5. Comparison of sales and net operating profit.

The discussion and illustrations on pages 829 to 833 will be of assistance in preparing this exercise.

Exercise No. 208

Prepare bar graphs from the facts shown on the Statement of Profit and Loss August 31, in Practice Set No. 4, as follows:

1. A bar graph showing gross sales; sales returns and allowances, if any; cost of goods sold, and gross profit or gross loss on sales. One bar will represent Ice Cream Sales and another bar will represent Merchandise Sales.

2. A bar graph showing gross profit on sales (for ice cream and merchandise sales combined), selling expenses (total), general expenses (total), and net operating profit.

CHAPTER LV

SINGLE ENTRY

Methods of Bookkeeping

It has been emphasized in previous chapters that in making a record of transactions an equality of debits and credits should be maintained. When this method is followed it results in what is known as *double entry* bookkeeping. It is based on the principle that each transaction involves an exchange of equal values, and that the record should show the value of the property or services received and of the property or services given in return in each transaction.

Sometimes another method of bookkeeping is employed in which no attempt is made to maintain an equality of debits and credits. Under this method only part of the effect of a transaction on the financial condition of a business may be shown in the accounting records. For example, $75.00 may be paid for one month's service of a stenographer. The payment of the $75.00 of cash may be recorded by a credit to Cash, but the receipt of the services is not shown. So it is with other transactions—the debit may be recorded and the credit ignored, or vice versa. This method of recording transactions is known as *single entry* bookkeeping.

Single Entry Bookkeeping

Single entry bookkeeping is a method of bookkeeping by which only part of the debits and credits resulting from the business transactions performed are recorded. It is in fact incomplete double entry. There is no uniform practice as to what should and what should not be recorded when single entry is used. Usually there are certain facts which the owner of the business thinks of particular importance and these are recorded while the remainder are omitted.

In nearly all cases a record is kept of the amount due from customers, the amount due to creditors, and of the cash receipts and disbursements. Some authors even go so far as to define single entry as a method of bookkeeping which provides a record of these and of nothing else. In practice, however, all kinds of variations and modifications may be found. A single entry system may be established which provides a record of only these items, but as the business expands, additional information will

be desired and the records will be modified to provide it. More and more information may be desired with consequent modifications of the bookkeeping records, until probably a double entry system will be developed.

It is impossible to say arbitrarily of what a single entry system may consist. It is more nearly correct to say that whenever there is a system of records which is not kept by double entry that it is a single entry system. Single entry was probably so called originally on the assumption that only one entry—that is, a debit or a credit—was made in the case of each transaction. This was never strictly true, for if a customer paid his account, Cash was debited and the customer's account was credited, and a similar procedure was followed in the case of other transactions. It is still less true at present under the modifications which have taken place. Any account kept in the case of double entry may be kept in the case of single entry. Consequently, in the case of many transactions equal debits and credits are recorded. However, so long as equal debits and credits are not recorded for all transactions, it is not *double* entry, and may be conveniently termed *single* entry.

Records Required for Single Entry

Any record used with the double entry method may be used with the single entry method. In the very simplest type of single entry, usually three records are required: the journal, the cash book, and the ledger.

If a record is kept with only creditors, customers and cash, the debits to the customers' accounts and the credits to the creditors' accounts would be from the journal. The cash received from customers is recorded on the debit side of the cash book and the credit to the customer's account is posted from here. The cash paid to creditors is recorded on the credit side of the cash book and the debit to the creditor's account is posted from here. The other items in the cash book are not posted.

It is not deemed worth while to illustrate the books used in single entry. It is not likely that the student will be required to keep a set of single entry books. When they are used at present, it is almost invariably because a bookkeeper is not employed and the books are kept by some one who is ignorant of bookkeeping methods, but has had to develop some means of obtaining some necessary information. If a bookkeeper is employed, it is almost always for the purpose of installing a double entry system. It is of little importance, therefore, to understand the details of operating a single entry system. The thing of primary importance is to know how to change a single entry system to a double

entry system, and this is explained later in this chapter. Even if it were deemed worth while, it is impossible to give an illustration of a single entry system which would be more than merely suggestive, for single entry systems vary widely and are not governed in their operation by any well-established principles as is the double entry system.

Proving the Accuracy of Single Entry Records

There is no satisfactory way of proving the accuracy of single entry records. Since there is no attempt to maintain an equality of debits and credits, a Trial Balance can not be made. The only proof of work possible is the checking of the ledger record with the record in the books of original entry. As a consequence, inaccuracies may occur which will not be detected. Of course, if errors occur in connection with the debiting or crediting of accounts receivable and payable, these may be detected at the time of settlement. If, however, the error is in favor of the customer or creditor, he may not report it and it may not be discovered.

Determining Profit and Loss under Single Entry

Since by the single entry method there is usually no record kept of the income and expenses of the business, and in no case is there a complete record, it is impossible to make a Statement of Profit and Loss. Although a Statement of Profit and Loss showing the results of the operations of the period is not possible, it is possible to determine the net profit or loss for a period by a comparison of a Balance Sheet made at the beginning of the period and a Balance Sheet made at the end of the period.

Determination of Profit and Loss by Means of the Balance Sheet

Some of the assets and liabilities appear on the ledger. The remaining assets can be obtained by means of an inventory and appraisal. The liabilities that do not appear on the ledger can usually be obtained by inspecting the memorandum records, the unpaid invoices, etc. After the assets and liabilities, including the accrued income, accrued expenses and deferred charges, are obtained, a Balance Sheet can be prepared which will give the net worth or proprietorship. If such a Balance Sheet is made both at the beginning and at the end of the fiscal period, a comparison of the net worth as shown by these Balance Sheets will show the profit or loss for the period, providing no additional capital has been added during the period or no withdrawals have been made.

To illustrate this method of determining profit or loss, it may be assumed that the financial condition of P. C. Dodge on Decem-

ber 31, 1925, and December 31, 1926, is represented by the following condensed Balance Sheets:

P. C. DODGE

BALANCE SHEET, DECEMBER 31, 1925

Current Assets	4,215 65	Current Liabilities	1,915 65
Deferred Charges	300	Proprietorship	5,000
Fixed Assets	2,400		
	6,915 65		6,915 65

P. C. DODGE

BALANCE SHEET, DECEMBER 31, 1926

Current Assets	5,829 50	Current Liabilities	2,149 50
Deferred Charges	340	Proprietorship	6,300
Fixed Assets	2,280		
	8,449 50		8,449 50

It will be seen that the proprietorship of Dodge has increased \$1,300.00 during the year. If no additional investment has been made during the year and no withdrawals have been made, this increase of \$1,300.00 in proprietorship shows the net profit for the year. It can be seen readily that if an additional investment has been made during the year, it must be subtracted from the increase of proprietorship, and that any withdrawals must be added before the net profit is obtained.

Although the net profit for the fiscal period may be obtained by a comparison of Balance Sheets, no analysis of expenses and income is provided; consequently it is difficult to judge as to the efficiency of past operations or to plan future operations. Such an analysis can be obtained only by a properly designed system of double entry records.

Comparison of Single Entry and Double Entry

Single entry as usually practiced is simple, and since a record is made of only part of the debits and credits which result from the transactions performed, the posting is much less than in double entry. No difficult analysis of transactions is involved and it is somewhat easier to understand by those who are untrained in accounting practice. This brevity and simplicity, however, are secured at the expense of the analysis and information which it is the primary function of the accounting system to provide. Double entry provides a classified record of every transaction, a proof of the accuracy of the record, and a full statement of the sources of the profits and of the causes of the expenses, and these can not be obtained from single entry records.

Consequently, single entry is employed very rarely at present by commercial firms. When it is employed by such firms, it is where, as was stated before, the smallness of the firm makes a bookkeeper unnecessary and someone untrained in accounting designs and keeps the records. In special cases single entry records may serve fairly satisfactorily. Professional men, such as doctors and lawyers, often keep their records by single entry. If, however, their expenses are of material size, the additional information obtained from double entry records is worth more than the extra labor involved.

Changing from Single Entry to Double Entry

When the accountant or bookkeeper finds a system of records kept by single entry, it is necessary for him to be able to change it to double entry. The first step in this process is the preparation of a Balance Sheet showing the assets, liabilities and proprietorship. The next step is to make the entries necessary to show in the records the same information that is given by the Balance Sheet. If a new set of records is to be opened, this is comparatively easy. It is only necessary to make a compound journal entry which records the assets, liabilities and proprietorship as shown on the Balance Sheet and to post these items to the appropriate accounts. If the same records are to be used, some of the assets and liabilities shown on the Balance Sheet will be already in the ledger. It is necessary to check these items which are already recorded in the ledger and to post only the additional items which are shown on the Balance Sheet, but not in the ledger.

To illustrate the method of making the entries in the latter case, it may be assumed that James Brown has been keeping a system of single entry books by which a record is maintained with cash, accounts receivable and accounts payable. The Balance Sheet of Brown on December 31, 1926, is as follows:

JAMES BROWN

BALANCE SHEET, DECEMBER 31, 1926

Assets			*Liabilities*		
Cash	522	75	Notes Payable	2,864	
Notes Receivable	86		Accounts Payable	2,978	40
Accounts Receivable	3,237	25	*Proprietorship*		
Merchandise Inventory	4,156	80	James Brown, Prop.	7,792	40
Office Furniture	482				
Building	2,150				
Land	3,000				
	13,634	80		13,634	80

The journal entry necessary to open the double entry books of Brown is as follows:

December 31, 1926

√	Cash	522 75	
	Notes Receivable	86	
√	Accounts Receivable	3,237 25	
	Merchandise Inventory	4,156 80	
	Office Furniture	482	
	Building	2,150	
	Land	3,000	
	Notes Payable		2,864
√	Accounts Payable		2,978 40
	James Brown, Proprietor		7,792 40
	To record the assets, liabilities, and proprietorship of James Brown on December 31, 1926, on which date his records are changed from single entry to double entry.		

It will be noticed that the entries for cash, accounts receivable and accounts payable are checked so they will not be posted. There are already accounts in the ledger with these items. No doubt there are separate accounts with customers and creditors maintained in the ledger. Accounts receivable and payable are shown as totals on the Balance Sheet and in the opening entry for the sake of brevity. If the separate accounts are shown in the opening entry, each of these will have to be checked and not posted. When the opening entries are posted, the ledger should be in balance and this should be proved by a Trial Balance.

Method of Keeping Statistical Records

Although it is important that a double entry record be made of the transactions recorded in the ledger, in many businesses there are supplementary records kept which are not kept by double entry.

There are many illustrations of these supplementary statistical records. In a store where there are several sales clerks employed, it is desirable to compare their efficiency in terms of sales. Consequently, a record is kept of their daily, weekly and monthly sales, and a report made, sometimes weekly and sometimes monthly, which shows their sales in comparative form. In the same manner a record may be kept of sales by departments, or of the sales of different commodities. Further analyses may be made to show sales by territories, by terms of sale, by method of delivery, etc. These analyses are usually made by means of supplementary records and are not shown in the ledger accounts.

The use of these supplementary records is suggested at this time in order that the student may not make the error of thinking that it is only from the double entry accounts that the information used as a basis of business management is obtained.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain the distinction between single entry and double entry bookkeeping.

— 2 —

Can a definite description of single entry bookkeeping be given? Why?

— 3 —

What records may be used in connection with single entry system?

— 4 —

Can a Trial Balance of a single entry system of bookkeeping be prepared? Why?

— 5 —

Can the correctness of such a system be proved in any other manner?

— 6 —

Explain and illustrate how profit and loss may be determined when records are kept by single entry.

— 7 —

Explain the advantages of double entry over single entry.

— 8 —

Explain and illustrate the method of changing single entry to double entry.

— 9 —

A. B. Smith has been keeping his records by single entry. He maintains accounts in his ledger with cash, customers and creditors. He desires to change his records from single entry to double entry, but intends to use the same ledger as before. Explain what would be necessary in making the entries to change his records from single entry to double entry in order to avoid a duplication of the accounts with cash, customers and creditors.

— 10 —

Explain how single entry records may be of value in gathering information for statistical purposes.

LABORATORY MATERIAL

Exercise No. 209

W. M. Hall, a retail grocer, has personally kept his bookkeeping records, using a single entry method. He desires to employ a bookkeeper who can prepare a statement of his financial condition as of June 30 and install a double entry set of books. A new fiscal period begins July 1; the same general ledger is to be continued in use.

Preliminary Data on Single Entry System Now in Use

1. Two books of original entry are used, a journal and a cash book. One ledger is used, containing accounts with Cash and customers only. Only the entries in the journal and cash book which affect these accounts are posted to the ledger; the other entries are not posted. At the end of each month, the total cash receipts and the total cash payments as shown by the cash book are posted to the debit and credit respectively of the Cash account. Debits to customers' accounts are made from the original sales slips, duplicates of which are wrapped with the merchandise sold; credits to customers' accounts are posted from the cash receipts record and the journal.

2. No accounts are kept with creditors, payments for purchases being made from invoices received. Mr. Hall purchases most of his stock from local wholesale grocery companies, which render an invoice for each of his purchases. These invoices are placed in a folder according to date payment is due; when due, they are paid and recorded in the cash book in the same manner as cash purchases. He also buys from local produce and poultry vendors; these are cash purchases and are entered directly in the cash book at the time of purchase.

3. A part of the cash received is retained in the cash register for use in making change; the balance of the cash received is deposited in the First National Bank of Lockland. On the first of each month, Mr. Hall obtains a statement from the bank and verifies the balance shown on it with the record on his check stub. The balance in the bank is then added to the amount of cash in the cash register and safe, and compared with the balance shown in the cash book; this proof is very rarely effected because of errors in making change and the fact that payments for miscellaneous purchases are sometimes made from the currency in the cash drawer and through oversight not recorded in the cash book.

Ascertaining the Facts to be Shown on the Financial Statement

1. The balance of the Cash account in the ledger, as well as the cash balance shown by the cash book, is $887.19; the balance

shown by the check stub is $829.45. If these amounts are correct, the difference between the balance shown by the cash book and the balance shown by the check stub should be the cash on hand. By actual count, the cash on hand is found to be $74.74. The statement received from the bank shows a balance of $998.90 June 30; on verifying the checks listed on this statement with those shown by the check stubs, it is found that Checks Nos. 459 and 463 for $27.30 and $142.15 respectively are not listed on the bank statement.

2. The customers' accounts in the ledger show the following balances: B. M. Darby, $22.45; Henry Silverman, $13.28; George H. Bemis, $49.55; E. D. Hertel, $8.23; John Shives, $38.74; A. T. Crockett, $72.67; R. O. Skillman, $45.00; F. X. Honing, $67.28; J. K. Plummer, $54.55. The account due from F. X. Honing has remained unpaid for eight months. On investigation, it is found that Mr. Honing has moved and his present address is unknown. Mr. Hall estimates that about 2% of the other accounts receivable will prove to be uncollectible.

3. June 30 Mr. Hall took a physical inventory of the merchandise in stock, counting a part and estimating the weight and quantity of the remainder. From purchase invoices and the record of cash purchases in the cash book, he prices the inventory at $2,438.52, using as a basis the cost of the last lot of goods of each kind purchased.

4. The fixtures used in the store were purchased from a previous owner two years ago at a cost of $355.00. A new glass showcase was bought six months ago for $135.00. Depreciation on the fixtures is estimated at 10% yearly.

5. The cost of the store supplies on hand is estimated at $21.85, and the cost of miscellaneous supplies such as are used by the bookkeeper is $13.60, using the same methods of calculation as those employed in obtaining the merchandise inventory.

6. Fire insurance policies in the safe are as follows: on store fixtures, $500.00, dated March 1 of this year, premium for five years paid in advance, $20.80; on merchandise, $2,000.00, dated September 1 of last year, premium for one year paid in advance, $22.28.

7. Mr. Hall owes the First National Bank of Lockland $1,000.00 on his six months' note, dated June 10. Interest at 6% was paid in advance on the date of the note.

8. Unpaid invoices on file are as follows: Mammoth Wholesale Grocery Co., for merchandise, $546.29; James D. Worth & Son, for merchandise, $180.04; Poorman Bros., for repairs, $14.25; Joseph Larkin, for painting front of store, $45.00.

INSTRUCTIONS: 1. On a sheet of ledger paper, open accounts with Cash and the nine customers of W. M. Hall, and record therein the balances of these accounts June 30. When this has been completed, the ledger shows the results obtained by Mr. Hall under his single entry system.

2. Make journal entries to adjust any differences between the accounts in Mr. Hall's ledger and the actual asset value of the accounts with Cash and customers. Post these entries to the ledger.

3. Prepare a Balance Sheet from the data given in this exercise.

4. Make a journal entry to record the assets, liabilities, and proprietorship of Mr. Hall as of July 1, checking any items which are now in the ledger. Assume that controlling accounts with accounts receivable and payable are to be maintained. Post this entry to the general ledger.

5. Open accounts with customers in the accounts receivable ledger, and accounts with creditors in the accounts payable ledger. Close the accounts with customers in the general ledger as the controlling account replaces these accounts.

6. Take a Trial Balance, and prove the subsidiary ledgers with their controlling accounts.

Retain your solution to this exercise for use in Exercise No. 210.

Exercise No. 210

After the installation of a double entry set of books July 1, the following adjustments of the accounts are required:

(a) Statements were sent out to customers July 1 for the purpose of verifying the balances of their accounts. July 3 R. O. Skillman reports that he was not given credit June 21 for a cash payment of $15.00 on his account. On investigation, it is discovered that no entry was made in the cash record for this cash receipt. The discrepancy between the cash record and the count of cash on hand June 30 is thus partly accounted for.

(b) July 7 a bill is received from Anderson Bros. for $5.60, store supplies purchased June 26. These supplies were included in the supplies inventory June 30, but the liability for their payment was not included in Accounts Payable.

(c) August 10, F. X. Honing, whose account was eight months past due on July 1, sent a bank draft for $35.00 to apply on account.

INSTRUCTIONS: 1. Record these facts in journal form.

2. Post these entries to the same ledger used in Exercise No. 209.

CHAPTER LVI

RELATION OF ACCOUNTING TO BUSINESS MANAGEMENT

Necessity for Information for Efficient Management

The business executive has under his management resources of various kinds. These resources may consist of land, buildings, machinery, labor, raw materials, and other kinds of commodities and services. It is the function of the business administrator to direct and control the use of these resources to the end that they be employed most efficiently in the production and sale of the commodities or services the business offers for sale. This control and direction can not be exercised in the most effective way unless it be based upon accurate and comprehensive information. Without such information the executive must guess rather than know what he should do.

The information needed in business administration is of various kinds. It consists in part of technical knowledge, which is obtained by formal training or experience, or preferably both. It consists in part of a knowledge of human nature and the method of dealing effectively with people. It consists to a considerable extent of a knowledge of the current social, political and economic conditions under which each business must be administered. All this information, and much more, is necessary to serve as a basis of judgments and decisions.

In addition to all this information, there must be statistical data which will show the results of past decisions, and the probable result of present and future ones. The information required is so varied in nature and must be obtained under such widely different conditions that arbitrary methods for its procurement can not be prescribed. Experience has shown, however, that in every business some statistical information of a more or less uniform nature is required in its administration. It has been found that there are fairly uniform methods which can be used in securing this information, and, hence, the science of accounting has been developed. In this sense, accounting is merely a somewhat formal way of recording and presenting statistical data to make it available for managerial purposes. Its function is to provide in part the information which serves as a basis of business management.

Nature of the Information Provided by Accounting

Accounting provides a method for obtaining information with reference to the operations of a business. Business operations involve the use of property in the securing of income. The property or assets of a business are provided partly by the proprietors of the business and partly by its creditors. The claims of the creditors against the assets of the business give rise to its liabilities. Consequently, the assets of a business can not be considered independently of its liabilities. The proprietors of a business attempt to use its assets and to control its liabilities so as to earn as large an income as possible. But in earning an income expenses are incurred. Consequently, the income and expenses of a business are so closely related that their joint consideration is necessary. Finally, the net income may be distributed to the owners or added to the proprietorship. If a loss occurs, this is deducted from the proprietorship. Both the owners and creditors are interested in the changes in proprietorship.

To provide information with reference to the operations of a business, therefore, accounting must make available in proper form:

1. Information with reference to assets and liabilities.
2. Information with reference to income and expenses.
3. Information with reference to proprietorship.

Relation of Accounting and Statistics

It may be well to explain that in the present and remaining chapters of this text *accounting* is used in a broad sense to include the various means and methods by which statistical information concerning a business is collected and made available for managerial uses. No attempt is made to make an arbitrary distinction between accounting and statistics. Statistics is the technique of gathering and presenting in intelligible form information which is capable of being expressed numerically. The term is quite inclusive, and, strictly speaking, accounting is merely a special use of the statistical method. Although we shall be interested primarily in the information obtained from accounting records, we shall frequently discuss data which are obtained by what are usually regarded as statistical rather than accounting means.

Method by Which Accounting and Statistical Data Are Obtained

It is from accounting and statistical reports that the executives of a business obtain a large part of the information which serves as the basis for the preparation and execution of their plans. But to have available the data which are required in the preparation of these reports, it is necessary to have records which serve

to collect, classify, and summarize accounting and statistical information. It is assumed that the student is familiar with the construction and use of the orthodox accounting records. In the following chapters the principal emphasis will be placed on the use of reports in business management. Some attention will be given to the records necessary for the procurement of the information contained in these reports. In the final chapters, the construction, organization and operation of statistical and accounting records for control will be discussed.

Parties Interested in Accounting and Statistical Reports

It has been previously stated that business management is primarily a matter of control, and that accounting should provide the information to facilitate such control. But control can be exercised only through individuals or groups of individuals, and information can be of value only when it serves the needs of those engaged in management. In other words, business management can be discussed only in terms of business organization.

Under present methods of business organization, the parties who exercise some influence in the administration of the typical business are quite numerous. The ultimate control of a business organization is vested in its owners. But in the modern corporate enterprise the control of the owners is exercised only indirectly. Most of their authority is delegated to a board of directors, which in turn delegates a large part of its authority to the executives of the corporation. The executives to a considerable degree intrust the execution of the policies of the business to subordinates, and these subordinates employ assistants who direct the activities of workers. Such a form of organization is illustrated graphically in Illustration No. 129.

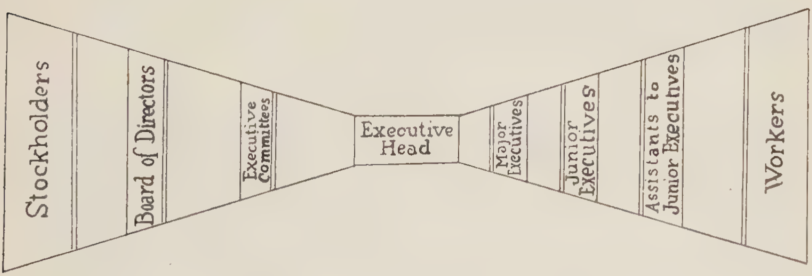


Illustration No. 129, Corporate Form of Organization

As indicated by Illustration No. 129, the stockholders, who may be quite numerous, select a board of directors, which usually

consists of from three to twenty-one members. The board of directors often selects a small committee, composed of from three to five members, which is termed the executive committee. This committee meets frequently and is responsible for deciding upon important questions which arise during the period between board meetings, which are usually held monthly. The chief executive of the business acts under the direct control of the executive committee and board of directors. He is responsible for the general administration of the business. In a corporation, this executive is usually the president, although in some cases the president may be subordinate to the chairman of the board of directors when the latter assumes active executive duties.

In a small business, the president may supervise and direct all of the activities of a business. In a business of any considerable size, it is impossible for the executive head to direct, much less actually perform, the work necessary for its administration. Other executives must be employed who will assist in the formulation and execution of the policies of the business. A number of such executives may be employed, and the duties they perform will depend to a considerable extent on the nature of the operations of the business, and the activities of business firms vary to a considerable degree. There are some activities, however, which are common to all businesses. In every mercantile and industrial business, sales must be made; the goods or services sold must be produced or purchased; the funds necessary to finance these operations must be procured; and finally, the accounting and statistical information necessary to exercise control of all these operations must be obtained.

Since it is necessary that these groups of activities be properly performed, executives should be appointed who are proficient in specific functions and responsibility placed on them for the proper performance of these functions. In pursuance of this policy, the president or general manager may have subordinate to him and reporting to him:

1. A Sales Manager, who is in charge of the marketing of the products or services upon whose sale the business depends for its chief revenue. The sales manager may also have subordinates, as, for example, one in charge of foreign sales and one in charge of domestic sales; and subordinate to, or coordinate with, him, there may be an advertising manager and his staff.

2. In a manufacturing business, a Production Manager, who is responsible for supplying the product or service necessary to meet the demands of the customers. The purchasing of the materials used in production would be in charge of a general purchasing agent who might or might not be subordinate to the production manager, but who, in any case, must cooperate with him.

3. In a trading business, a Merchandise Manager, who supervises the purchases of the goods to be sold. In a large business he would be assisted by various subordinates, including departmental buyers who are specialists in certain types of merchandise purchasing. In some mercantile establishments, the merchandise manager supervises both the purchasing and the selling of the firm's merchandise.

4. A Financial Manager, who is responsible for the formulation and execution of the financial policies of the business. Usually, he is not given final authority on major questions of financial policy. These are dealt with by the president and the board of directors. The function of this financial manager, who is usually called the Treasurer, is to provide expert advice on the financial policies of the business and to execute these policies after they are adopted. Subordinate to the financial manager, there may be a credit manager and a collection manager. In any case, there must be close cooperation between the financial manager and those who guard the credits of the firm.

5. A Controller, who has supervision of the accounting records and the preparation of accounting and statistical reports, and is responsible for the interpretation of these reports. In many companies there is not a controller, but a chief accountant or office manager performs this function.

Such an organization for a manufacturing business is shown graphically in Illustration No. 130.

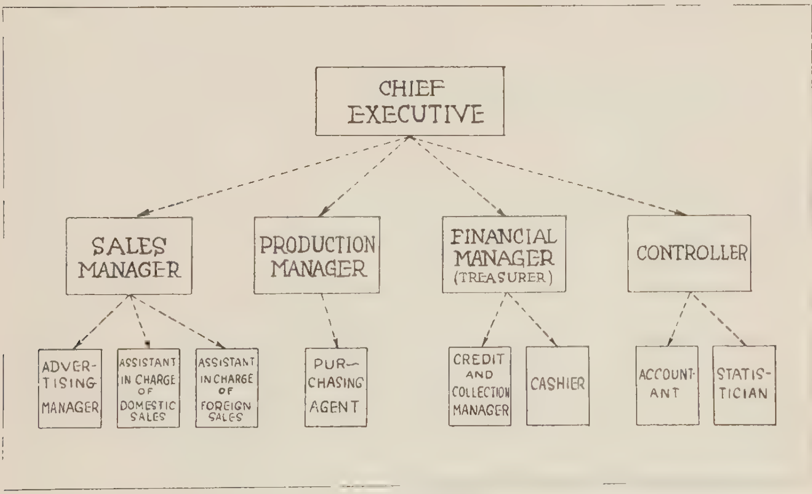


Illustration No. 130, Functional Form of Organization

This list of executives who assist the president or general manager in the formulation and execution of the policies of the business is intended to be suggestive rather than inclusive. The ones shown are those who are necessary to supervise and control the functions common to the typical business. In a small business the same manager may be responsible for two or more functions, but this does not destroy functional responsibility. It means only that this manager is acting in a dual capacity. In a large business there may be other executives, such as personnel manager, traffic manager and chief engineer.

In such an organization it is very essential, if effective control is to be exercised, that there be available information of three kinds:

1. Information which will serve as a basis for the formulation of the general policies of the business and for the delegation by each group of certain duties to the next subordinate group.
2. Information which will enable each group to perform properly the duties delegated to it and to coordinate its activities with those of all the other groups.
3. Information which will enable each manager to judge as to the efficiency with which the duties delegated by him have been performed by his subordinates.

It can be seen, therefore, that as business organization becomes more complex, a demand for accurate information with reference to the operations of the business becomes more imperative.

In addition to those who are directly responsible for the management of the business, there are others who desire information with reference to it. Prospective creditors, both long-time and short-time, desire information which enables them to judge the advisability of entering into relations with the business. If they become creditors, and especially if they become long-time creditors, they will desire information which will show them how carefully their security is being maintained in the proper condition. Governmental agencies desire information for purposes of taxation and control. The information which creditors and government agencies require is not very dissimilar to that required by the stockholders of the business, since usually the latter exercise only a passive control, the actual direction of the business being in the hands of the directors and the executives. From the point of view of accounting, therefore, the stockholders may be classified with creditors and governmental agencies.

In view of this discussion, it should be apparent that if accounting is to serve as an aid in administration, it must provide the

executive head of a business with information which will enable him to exercise proper control over relations of two kinds:

1. Relations with those who are external to the business, such as stockholders, creditors and governmental agencies.
2. Relations with those who are responsible for the internal management of the business, that is, the major and junior executives of the business.

The various relations over which accounting provides a means of control is shown in diagram form in Illustration No. 131.

Illustration No. 131, Diagram Showing Relations Over Which Accounting Provides a Means of Control

It is not intended to imply that there is always a separate individual charged with the supervision of each class of operations shown in this chart. From the point of view of administration, however, each of these classes of operations constitutes a need for accounting data.

The reports necessary to supply the information needed by these various parties may be classified as follows:

1. Reports showing present financial condition. The Balance Sheet in its various forms is used for this purpose.
2. Reports showing the results of past operations. The various forms of expense and income analyses and Statement of Profit and Loss serve this purpose.
3. Reports showing pertinent information which is necessary for the daily actions of the executives and employees. Such reports may consist of a statement for the treasurer showing the accounts falling due on the current day; of a report to the collection manager showing accounts thirty, sixty and ninety days past

due; of a report to the sales manager showing the slow-moving items of stock; and various other reports of a similar nature.

4. Reports showing anticipated results of future operations. Such reports include estimates of sales, estimates of purchases, estimates of production, and estimates of net profit to be obtained as a result of operations for a certain period of time. Such estimates serve as a basis of future plans.

In the following chapters, typical examples of these various kinds of reports will be discussed and illustrated.

Need for Estimates

The Balance Sheet shows the financial condition of a business as of a certain date. The Statement of Profit and Loss shows the results of the operations of a business for a certain period of time. This information is of primary value to the executive head of the business and those external to the administration of the business with whom he has business relations. Estimates show the anticipated result of future operations and are of primary value to the executive head of the business and those who are responsible for its internal administration.

It has long been regarded the function of the accountant to prepare Balance Sheets and Statements of Profit and Loss which reflect the result of past operations. Many, however, will oppose the idea that it is the function of the accountant to deal with estimates of the result of future operations. But if the accountant is to be of most service in business administration, he must deal with future operations, for it is only future operations that are subject to control. To control future operations involves the making of plans, and plans necessitate estimates of future results. Such estimates are dependable only when they are based on a proper analysis of past operations, and the accountant should be the one best qualified to provide such an analysis.

No doubt in the near future, both business men and accountants will realize that all accounting reports are but estimates, and though estimates of past results such as the Balance Sheet and the Statement of Profit and Loss may be more accurate, estimates of future results may be equally useful. It is not intended to imply that estimates of future results, such as estimates of sales, purchases and production, should be entered in the accounts. The information shown in the accounts, however, should serve as a basis for the preparation of such estimates, and it should serve as a means of checking the accuracy of the estimates, since the actual results, as shown by the accounts at the end of the period, can be compared with the estimated results.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The Brown Steel Company has its general offices in New York. It has ten branches operating in ten different states. What is necessary to enable the general manager at New York to exercise control over the operations of the branches?

— 2 —

In what way has the development of large business organizations affected the problem of business management? Illustrate how this change in business management has affected the development and use of accounting.

— 3 —

What will be the probable tendency with reference to the need for and use of accounting in the future? Give illustrations to support your answer.

— 4 —

Large companies sell stocks and bonds in many markets and to many people. How do these purchasers determine the financial reliability of the firm issuing such stocks and bonds?

— 5 —

Explain and illustrate how the government may be interested in the affairs of the individual business. In what way does the government obtain the information it desires from such businesses?

— 6 —

Mr. King is president and general manager of the King Automobile Company, which manufactures and sells automobiles. The company has two factories and fifty sales offices. Mr. King desires to know daily the following:

a. Machines produced at each factory.
b. Total machines sold by all branches.
c. Bank balance at each bank with which the company has deposited funds.
d. Amount borrowed from each bank.

Explain how this information will be obtained for Mr. King.

— 7 —

Explain why each of these items of information is desired by Mr. King.

— 8 —

Assume you are an assistant to Mr. King and are responsible for the presentation of this information to him each day. Explain how you would present it to him so that it will be of most service to him.

— 9 —

In order to have a basis for planning the sales campaign of the next year, Mr. King desires to know the following:

a. The number of persons engaged in each profession and in each line of business in each state in which the company has an agency.

b. The number of persons in each state receiving a yearly income of $2,000.00 or above.

c. The number of cars of the King Automobile Company which are sold in each state.

Explain how this information may be obtained for Mr. King.

— 10 —

Explain why each of the items of information called for in (9) is desired by Mr. King. Can you think of any other information he might use in planning his sales campaign? If so, explain how it will be obtained.

— 11 —

Under what circumstances will information similar to that in (9) be of service with reference to states in which the company has no sales offices?

— 12 —

The King Automobile Company, after investigating the sales possibilities, has decided to open a sales office at Dallas, Texas. It has opened an account with the First National Bank of that city, and it desires to arrange to borrow funds from the bank as it needs them in the financing of its office. What information will the bank request from the company before agreeing to extend credit to it? How will this information be obtained and in what form will it be presented to the bank?

— 13 —

What other parties than the bank may desire the same information desired by the bank?

— 14 —

Explain the difference between the information called for in Questions (6), (9) and (12). To obtain which of these three kinds of information has accounting been most used in the past? Why?

— 15 —

The James Manufacturing Company manufactures machine tools. It sells through ten district sales offices. It has three factories located at Boston, Philadelphia and Chicago, respectively. In addition to the sale of the tools which it manufactures, it buys and sells tools and equipment produced by other companies. Mr. A. L. James is president of the company. State the officers you think Mr. James needs to assist him in the management of the business and state in a general way the duties of each of these officers.

— 16 —

"As business organization becomes more complex, a demand for accurate information with reference to the operations of the business becomes more imperative." Explain and illustrate.

— 17 —

The reports needed in business administration include those "showing pertinent information which is necessary for the daily actions of the executives and employes." Give illustrations of such reports.

— 18 —

"Estimates show the anticipated result of future operations and are of primary value to the executive head of the business and those who are responsible for its internal administration." Give illustrations of estimates which may be used by the executives of a business.

— 19 —

"The accountant is a historian and not a prophet." What does this statement mean?

— 20 —

Can you reconcile the foregoing statement with the following: "But if the accountant is to be of most service in business administration, he must deal with future operations, for it is only future operations that are subject to control."

LABORATORY MATERIAL

Exercise No. 211

The W. F. Baird Corporation operates a wholesale dry goods store. It has five merchandise departments. In addition it has the following auxiliary departments:

(a) Receiving
(b) Shipping
(c) Accounting
(d) Finance

The purchases are made by the heads of the merchandise departments. The company owns the property on which it is located, but there is a mortgage outstanding against this property. It also owns the trucks which are used in transferring goods bought and sold from the warehouse of the company to the station, and vice versa.

It buys and sells only on account. It both grants and receives discounts for prompt payment of cash. It sometimes receives trade acceptances from customers, but does not issue either trade acceptances or notes to merchandise creditors. It borrows funds from local banks on its notes. The head of each of the five departments receives a percentage of the profits of the department in payment for his services.

INSTRUCTIONS: 1. Prepare a Balance Sheet for the W. F. Baird Corporation showing the asset, liability and proprietorship items you think the company should show on this statement. In preparing this Balance Sheet, omit the amounts and show only the items. The position of the amounts on the Balance Sheet may be indicated by dotted lines. For example, the Building account may be shown as follows:

Building	......	..		
Reserve for Depreciation	......	..	......	..

2. Prepare a Statement of Profit and Loss containing the items of income and expense you think would be of interest to the President and General Manager of the company. In the preparation of this statement, the amounts may be omitted and the same procedure followed which is suggested for the Balance Sheet required in (1).

Exercise No. 212

Prepare a chart similar in form to Illustration No. 130, showing the organization of the W. F. Baird Corporation. In the preparation of this chart, make any assumptions you think are necessary, but state these assumptions as footnotes to your chart.

CHAPTER LVII

THE STANDARD FORM OF BALANCE SHEET

The Standard Form of Balance Sheet

Professional accountants and writers on accounting, as well as those interested in credit granting, have given much attention to the Balance Sheet as a formal statement of financial condition. Many attempts have been made to devise a standard form for use by business enterprises generally. The assumption underlying these attempts is that a single form can be devised capable of giving all those interested in the financial condition of a business the information they desire.

Professional accountants have had much to do with the attempt to develop a standardized form. They have been influenced, no doubt, by the fact that they are usually called upon at the end of the fiscal period to prepare one Balance Sheet, which may be used for various purposes. Consequently, they desire to develop the form which will best serve the needs of all parties. Credit men acting through such organizations as the National Association of Credit Men and the American Bankers Association have also exercised considerable influence in the movement for a standard form. They wish to request its use by applicants for credit and by this means secure more useful information than they will obtain if each applicant is left to prepare his Balance Sheet as he prefers.

A uniform or standard form of Balance Sheet has some distinct advantages:

1. It sets up a standard with which business firms can compare their reports. This will be especially true if credit men and others interested in the financial condition of business firms insist on the use of the standard form.

2. It tends to develop a uniform accounting terminology, which has been woefully lacking. For example, it tends to develop a standard meaning for such terms as "fixed assets," "current assets," "deferred charges," "reserves," etc. The development of a uniform terminology and a uniform classification and arrangement of Balance Sheet items makes it possible to read a Balance Sheet more easily and accurately.

3. It makes possible a comparison of data in connection with different firms and for different periods. As a result, a banker or a merchandise creditor is not only able to understand from the Balance Sheet the financial condition of a customer applying for credit, but is also able to compare the present financial condition of the customer with his previous financial condition, as shown by previous Balance Sheets. He may also compare his condition with that of other firms in the same line of business, as shown by their Balance Sheets. This would not be possible (or would at least be difficult) if different firms used different forms of reports and a different terminology, or if the same firm did not use the same form and terminology in all its Balance Sheets.

There are at least two disadvantages in the use of the standard form of Balance Sheet:

1. With uniformity there is always a tendency toward rigidity and inelasticity. This is almost inevitably the result, for when uniformity is once secured, a change is made with difficulty. Standards of all kinds should be subject to constant scrutiny, and they should be revised as soon as such revision seems desirable and feasible. It is not so difficult to make revisions of the standards of any specific business, but when standards are established for the use of business firms in general, such revisions are often difficult to secure.

2. No one form can be devised which will show properly the financial condition of all types of business firms under changing business conditions. The Balance Sheet is intended to present a financial picture of the firm for which it is made. The operations of business firms vary widely. This results in a wide divergence in the nature of their assets, liabilities, and proprietorship. Consequently, it is impossible to have one picture which will present a true likeness of all firms.

Probably the most that can be done to obtain the maximum benefits, and to eliminate the disadvantages which may arise from such standardization, is:

1. To follow in the construction of each Balance Sheet those general principles applicable to all Balance Sheets and consequently capable of standardization.

2. To develop a standard practice for the arrangement and classification of the items which customarily appear on all Balance Sheets.

The first of these problems has been discussed in considerable detail in previous chapters. We shall content ourselves here with a discussion of the most important questions with reference to arrangement and classification of Balance Sheet items.

The English Form of Balance Sheet

In England the Balance Sheet is customarily prepared with the liabilities and proprietorship on the left-hand side, and the assets on the right-hand side, while in the United States the arrangement is just the reverse. There has been much discussion of the reasons for this difference of practice and the merits of the two methods. Probably the present English practice is due to the incorporation of the English form in laws passed many years ago. The reason for the use of this form in these laws does not seem to be clear.

Report and Account Form

Two general forms of the Balance Sheet are in use in the United States. On the first, which is known as the "report" form, the assets are listed and their total extended. Then the liabilities are listed immediately below the assets and their total extended below the total of the assets. By subtracting the two totals, the proprietorship is obtained. On the second, which is known as the "account" form, the assets are listed directly opposite the liabilities and proprietorship. The total of the assets is extended on a horizontal line with the total of the liabilities and proprietorship.

The report form is probably more easily understood by one untrained in accounting, since it seems logical to him to have a statement prepared in arithmetical form. The account form, however, is more often used by accountants, and may be regarded as the standard type. Its prevalent use is probably due to the fact that it is better adapted for showing comparisons than is the report form. In the case of corporations or large companies, its use probably causes no confusion. For sole proprietorships and small firms, the report form is often more useful.

Priority of Different Classes of Assets and Liabilities

Another important aspect of the general form of Balance Sheets is the order in which the assets and liabilities are listed. According to one practice, the fixed assets are shown first on the Balance Sheet, followed by the remaining assets in the order of their liquidity, the most fixed in each case appearing first. On the opposite side, the capital stock is shown first, followed immediately by the fixed liabilities, and these in turn are followed by the remaining liabilities in the order of their permanency, with those which are most permanent placed first. Items of proprietorship other than capital stock are placed as the last items on the liability side. According to the second method, the current assets are placed first on the asset side followed by the remaining assets in the order of their liquidity, the most liquid in each case appearing first. On the opposite side, the current liabilities are

placed first, followed by the remaining liabilities in the order of their permanency, the most permanent appearing last. The proprietorship items are shown in one group after all the liabilities are stated.

The first method is illustrated by the following skeleton outline:

THE KING CORPORATION

BALANCE SHEET, DECEMBER 31, 19....

Assets			*Liabilities and Proprietorship*		
Tangible Fixed Assets .	......	..	Capital Stock.........	......	..
Intangible Assets......	......	..	Funded Debt..........	......	..
Investments...........	......	..	Deferred Credits......	......	..
Deferred Charges to Expense...............	......	..	Current Liabilities.....	......	..
			Reserves..............	......	..
Current Assets........	......	..	Surplus...............	......	..
Total............	......	..	Total.............	......	..

The second method is illustrated in like manner by the following skeleton outline:

THE KING CORPORATION

BALANCE SHEET, DECEMBER 31, 19....

Assets			*Liabilities and Proprietorship*		
Current Assets........	......	..	Current Liabilities.....	......	..
Deferred Charges to Expense..............	......	..	Funded Debt..........	......	..
			Deferred Credits......	......	..
Investments...........	......	..	Capital Stock.........	......	..
Tangible Fixed Assets .	......	..	Reserves..............	......	..
Intangible Assets......	......	..	Surplus...............	......	..
Total............	......	..	Total.............	......	..

It is the opinion of the author that the second method is usually the more logical and more useful. The current assets and the current liabilities are those most subject to change and are presumably the ones in which chief interest should be manifested by the periodic inspector of the Balance Sheet. It is also the current items which are more likely to indicate the need of immediate action. It is therefore logical to place these first on the Balance Sheet as a means of emphasis. Another important advantage of the second method is that it results in showing all the items of proprietorship together, while by the first method capital stock is customarily shown as the first item on the liability side of the Balance Sheet and the proprietorship reserves and surplus are shown as the last items. This procedure seems as inconsis-

tent as would the placing of cash on hand as the first item and cash in bank as the last item on the asset side of the Balance Sheet. Again, proprietorship is not a liability in the sense in which that term is generally understood. It is desirable that its distinction from the liabilities be indicated by showing it separately. The second facilitates this procedure since it places all proprietorship items together.

Order of Asset and Liability Groups

There is some difference of opinion concerning the proper position of certain asset and liability groups when either of these forms of Balance Sheet is used. There is also a difference of opinion concerning the group in which some items should be placed. Those groups and items about which there is the most frequent difference of opinion are the following:

1. Investments
2. Intangible Assets
3. Deferred Charges and Credits
4. Reserves
5. Contingent liabilities

Each of these will be discussed briefly.

Investments

Many accountants show investments as current assets if they consist of stocks or bonds which are readily salable. They do this on the theory that since they are readily salable, they can be easily converted into cash and therefore are liquid or current assets. The author suggests that current assets should include only those which *will* be converted into cash in the regular operations of the business. Since there is no assurance that securities will be converted, it seems better to show them under a separate heading. Again, securities do not arise as a result of the normal operations of the business. Therefore, it is better to exclude them from current assets, so that comparative figures over a number of periods will be more significant.[1]

All accountants are agreed that securities which are held for the purpose of exercising an essential control of the company they represent can not be considered as current assets. It is better, therefore, to have a section entitled "Investments" under which will be shown both temporary and permanent investments. Each class should be described so as to indicate clearly its nature.

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[1]If items which do not result from the normal trading operations are included in current assets, such significant standards as the ratio of current assets to sales and the ratio of current assets to current liabilities are materially affected.

Intangible Assets

Intangible assets are sometimes shown as a part of the fixed assets, but because of their distinctly different (and sometimes questionable) nature, it is better to show them as a separate item, so that they will be plainly evident to all who inspect the Balance Sheet. Sometimes the value of the intangible assets is omitted entirely from the Balance Sheet, but attention is called to the existence of these assets by a note at the bottom of the list of assets. For example, a recent Balance Sheet of a large holding company and its subsidiaries contains the following statement on the asset side:

> "This Balance Sheet does not take into account the capital asset of good-will on the books amounting to $57,798,000, nor the patents or trade-marks carried on the books at $1.00, but shows the condition of the company on the basis of tangible capital assets."

On the Balance Sheet recommended by the Federal Reserve Board as shown on pages 870 and 871, the intangible assets, so far as they are represented by good-will, are shown as a subtraction from the surplus. Although both of these plans have much to commend them as a method of treating good-will (in most cases the principal item of intangible assets), it is doubtful whether they can be justified as a means of showing such intangible assets as patents and copyrights. These assets may have a very real value, and there seems to be no good reason why they should not be shown in the same manner as any other asset. Of course, they should not be shown at inflated values.

Deferred Charges and Credits

There is some question concerning the position of the deferred charges and deferred credits. Many accountants place the deferred charges as the last item among the assets. It seems more logical to place these immediately after the current assets, since by the operation of the business they will be consumed in the production of a salable commodity or service in the near future. Most of the fixed assets are, strictly speaking, deferred charges to expense, being gradually charged to expense by the periodic depreciation charge. The deferred charges are placed under a separate heading because they are expected to be charged off more quickly than fixed assets such as machinery and buildings. It seems proper, therefore, that they be placed between the current assets and the fixed assets to indicate that they are more liquid than the latter. It is assumed that the deferred charges to expense will include only items like prepaid insurance and interest. Deferred charges to profit and loss, such as organization expenses, are properly shown after all the assets are stated.

Deferred credits to income are sometimes shown immediately above the proprietorship items, presumably on the theory that they are surplus items held in reserve. Some accountants place them immediately after the current liabilities on the theory that they represent liabilities of a current nature until a service is rendered in satisfaction of them.

Reserves

Accountants and business men differ as to the method of showing reserves on the Balance Sheet. This difference is probably due in large part to a failure to see clearly the nature of reserves, and to distinguish between the different classes of reserves. Three kinds of items may be found on the Balance Sheet under the title of reserves:

1. There are reserves for taxes and similar items which are not reserves in the proper sense, but instead are accrued liabilities. They should be shown as such under current liabilities.

2. There are reserves which represent the estimated decrease in the value of assets, such as reserves for depreciation and reserves for bad debts. These should be shown on the asset side of the Balance Sheet as deductions from the assets to which they pertain. That is, the reserves for depreciation should be deducted from the fixed assets on which they are estimated, and the reserve for bad debts should be deducted from the accounts receivable. These reserves may properly be called "valuation" reserves since they are used in determining the value of assets.

3. There are reserves which represent surplus that has been set aside for a certain length of time for a specific purpose, and which later will be carried back to Surplus account. Since these reserves will be later transferred back to surplus and represent surplus which is temporarily restricted as to use, they may be considered as a part of the surplus and therefore a part of the proprietorship of the business. The reserve of this kind which is of most frequent occurrence is the reserve for sinking fund. The nature of this reserve can be illustrated by the following case:

The XY Corporation issues $20,000.00 in bonds, payable in twenty years, with a provision that $1,000.00 shall be carried to reserve for sinking fund each year. At the time the bonds are issued, the following entry will be made:[1]

	Cash	20,000		
	Bonds Payable			20,000
	To record the sale of bonds for cash.			

[1]For the sake of simplicity the entry for bond discount or cost of selling bonds is omitted.

At the end of each year the following entry will be made:

Surplus		1,000	
Reserve for Sinking Fund			1,000
To record the annual credit to sinking fund in accordance with the terms of the mortgage.			

At the end of twenty years, the Bonds Payable and the Reserve for Sinking Fund accounts will show the following balances:

Bonds Payable

									20,000

Reserve for Sinking Fund

									20,000

When the bonds are paid, the following entry will be made:

Bonds Payable		20,000	
Cash			20,000
To record the payment of bonds.			

Since the bonds are now paid, there is no further use for the reserve for sinking fund, and the $20,000.00 shown in the Reserve for Sinking Fund account will be carried to the Surplus account by the following entry:

Reserve for Sinking Fund		20,000	
Surplus			20,000
To record the transfer of the reserve for sinking fund to surplus.			

Since the reserve for sinking fund eventually goes back into surplus, the balance of this account throughout the twenty years may be regarded as appropriated surplus, and shown as a part of the net worth of the business.

Other reserves of the same nature as the reserve for sinking fund are reserve for extensions and reserve for retirement of stock. A reserve for contingencies is customarily placed in this group and this practice seems expedient, although part of this reserve will not go back to surplus if the contingencies materialize. This group of reserves is termed "proprietorship" reserves and is shown on the Balance Sheet as a part of the proprietorship.

Sometimes reserves of all kinds are shown in one group on the liability side of the Balance Sheet under the general heading of reserves. In this group are included such items as accrued taxes, reserve for depreciation on buildings, and reserve for sinking fund. This procedure is clearly erroneous, since it combines under one heading items which are entirely different in nature, the only similarity being that in a double-entry set of records they are all shown on the credit side of the ledger. There is an increasing tendency to show the valuation reserves as a subtraction from the related assets.

Contingent Liabilities

Contingent liabilities are shown on the Balance Sheet in different ways. The different methods of showing them can be illustrated by the most frequent contingent item, discounted notes receivable. These may be shown in three ways. The notes receivable discounted may be shown as both an asset and a liability. The two items serve to cancel each other, but by their presence among the assets and liabilities, attention is called to the existence of the contingent liability. This method is illustrated by the Balance Sheet shown on pages 870 and 871. A modification of this method is to show the contingent liability item subtracted from the asset item, on the asset side of the Balance Sheet. A second method is to omit all reference to the contingent liability in the Balance Sheet proper, but call attention to it by means of a footnote to the Balance Sheet. A third method is to show the contingent liability by a note on the liability side before the total of the liabilities are shown. Of course, the amount of the contingent liabilities is not extended into the total liability column.

Any of these methods is satisfactory, but the last method shows the contingent liability in an effective manner, eliminates the necessity of adding undesirable footnotes resulting from the second method, and prevents the distortion of the totals of the assets and liabilities resulting from the first.

Standard Form of Balance Sheet, Showing Detailed Classification of Items

The Federal Reserve Board has suggested the standard form of Balance Sheet shown in Illustration No. 132 for general use by all business concerns having occasion to seek credit from banks which are members of the Federal Reserve System. This Balance Sheet was prepared for the Federal Reserve Board by a committee of accountants representing the American Institute of Accountants. It represents, therefore, the best opinion of the profession, and is worth a careful study by the student.

ASSETS

CASH:		
1a. Cash on hand—currency and coin	....	
1b. Cash in bank	....	....
NOTES AND ACCOUNTS RECEIVABLE:		
3. Notes Receivable of customers on hand (not past due)	....	
5. Notes Receivable discounted or sold with endorsement or guaranty	....	
7. Accounts Receivable, customers (not past due)	....	
9. Notes Receivable, customers, past due (cash value $.....)	....	
11. Accounts Receivable, customers, past due (cash value $.....)	....	
LESS:		
13. Provisions for bad debts	....	
15. Provisions for discounts, freights, allowances, etc.	....	....
INVENTORIES:		
17. Raw material on hand	....	
19. Goods in process	....	
21. Uncompleted contracts, less payments on account thereof	....	
23. Finished goods on hand	....	....
OTHER QUICK ASSETS (describe fully):		
....	....	
....	....	....
Total quick assets (excluding all investments)		....
SECURITIES:		
25. Securities readily marketable and salable without impairing the business	....	
27. Notes given by officers, stockholders or employees	....	
29. Accounts due from officers, stockholders or employees	....	....
Total Current Assets		....
FIXED ASSETS:		
31. Land used for plant	....	
33. Buildings used for plant	....	
35. Machinery	....	
37. Tools and plant equipment	....	
39. Patterns and drawings	....	
41. Office furniture and fixtures	....	
43. Other fixed assets, if any (describe fully)	....	
	....	
LESS:		
45. Reserves for Depreciation	....	
Total Fixed Assets		....
DEFERRED CHARGES:		
47. Prepaid expenses, interest, insurance, taxes	....	....
OTHER ASSETS:		
49.	....	....
Total Assets		....

Illustration No. 132, Federal Reserve Board Balance Sheet

LIABILITIES

Bills, Notes and Accounts Payable:

Unsecured bills and notes—

2. Acceptances made for merchandise or raw material purchased	....		
4. Notes given for merchandise or raw material purchased.....	....		
6. Notes given to banks for money borrowed................	....		
8. Notes sold through brokers.............................	....		
10. Notes given for machinery, additions to plant, etc.........	....		
12. Notes due to stockholders, officers or employees............	....	....	

Unsecured Accounts:

14. Accounts payable for purchases (not yet due)..............	....		
16. Accounts payable for purchases (past due)..................	....		
18. Accounts payable to stockholders, officers or employees......	....	....	

Secured Liabilities:

20a. Notes Receivable discounted or sold with endorsement or guaranty (contra)..............................	....		
20b. Customers' accounts discounted or assigned (contra).....	....		
20c. Obligations secured by liens on inventories.............	....		
20d. Obligations secured by securities deposited as collateral....	....	....	
22. Accrued liabilities (taxes, wages, etc.)......................	....	....	

Other Current Liabilities (describe fully):

....	....		
....	....	....	
Total Current Liabilities..........................		....	

Fixed Liabilities:

24. Mortgages on plant (due date ......)....................	....		
26. Mortgages on other real estate (due date ......)...........	....		
28. Chattel mortgage on machinery or equipment (due date .....)	....		
30. Bonded debt (due date ......)...........................	....	....	
32. Other fixed liabilities (describe fully):			
....	....		
....	....	....	
Total Liabilities..................................		....	

Net Worth:

34. If a corporation—			
(a) Preferred stock (less stock in treasury)............	....		
(b) Common stock (less stock in treasury)............	....		
(c) Surplus and undivided profits....................	....	....	
Less:			
(d) Book value of goodwill.........................	....		
(e) Deficit...	....	....	
36. If an individual or partnership—			
(a) Capital..	....		
(b) Undistributed profits or deficit....................	....	....	
Total Liabilities and Net Worth.....................		....	

Illustration No. 132, Federal Reserve Board Balance Sheet

Comments on Balance Sheet Proposed by the Federal Reserve Board

This Balance Sheet presents several interesting points:

1. It shows an analysis of assets and liabilities more detailed than is necessary in the usual Balance Sheet. This detail is given because this Balance Sheet is prepared from the banker's or credit point of view. The detailed analysis of receivables and payables is useful in making a credit analysis.

2. The assets and liabilities are arranged in the order of liquidity, the most liquid appearing first. This corresponds to the preferred procedure stated earlier in this chapter.

3. The current assets and current liabilities are set off by sub-totals so that net working capital can be easily computed. The use of sub-totals greatly facilitates the interpretation of financial statements.

4. The deferred charges covering prepaid interest, insurance, taxes, etc., are shown following the fixed assets. Although the position of these items is not of major importance, it is preferable from the author's point of view that they be shown immediately after the current assets.

5. The proprietorship items are shown in one group and totaled in such a manner that the net worth of the business is easily ascertained. This is in conformity with the arguments presented earlier in this chapter.

6. The good-will is excluded from the assets and shown as a deduction from surplus. The purpose of this is to show as assets only those of a tangible nature. This is ultra-conservative if the intangible assets represent real values.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain the advantages derived from the use of a standard form of Balance Sheet. Give illustrations of such advantages.

— 2 —

Explain the possible disadvantages of the general acceptance of a standard form of Balance Sheet.

— 3 —

Explain and illustrate the difference between the report and account form of Balance Sheet.

— 4 —

How do you explain the fact that on some Balance Sheets the fixed assets are shown first, while on others the current assets are shown first?

— 5 —

The liability side of the Balance Sheet of the American Manufacturing Co. appears as follows:

LIABILITIES

Capital Stock:	
Preferred Stock	$100,000.00
Common Stock	200,000.00
Accounts Payable	75,000.00
Notes Payable	85,000.00
Bonds Payable	225,000.00
Surplus	65,000.00
Total Liabilities	$750,000.00

State your objections to this method of showing the liability side of the Balance Sheet, and explain how you would change it.

— 6 —

Does a difference in form in any way affect the financial condition of the business as shown by the Balance Sheet?

— 7 —

For whose use is the Balance Sheet intended? Explain how this consideration affects the form of the Balance Sheet, and the amount of detail shown by it.

— 8 —

Explain the nature of the information which may be desired by governmental agencies with reference to a business. In what way is the Balance Sheet of value in providing this information?

— 9 —

Explain and illustrate how the following may be classified on the Balance Sheet: (a) accounts receivable, (b) notes receivable, (c) notes payable.

— 10 —

What is a *contingent* liability? Illustrate.

— 11 —

Explain and illustrate three ways in which notes receivable discounted may be shown on the Balance Sheet. Why should they be shown on the Balance Sheet at all?

— 12 —

The financial condition of the J. C. Jung Paper Co. is shown by the following Balance Sheet:

J. C. JUNG PAPER CO.

BALANCE SHEET, DECEMBER 31, 19....

Assets			*Liabilities and Proprietorship*		
Cash..................		85,000	Accounts Payable		80,000
Accounts Rec....	95,000		Accrued Int. on Bonds ..		1,250
Bad Debts Res.	4,750	90,250	Notes Rec. Disc...	20,000	
			5% Mort. Bonds Pay. ..		100,000
Inventories (at cost)....		100,000	Capital Stock..........		200,000
Deferred Charges.......		2,000	Surplus................		140,000
Plant and Equip .	250,000				
Res. for Dep...	50,000	200,000			
Goodwill...............		44,000			
Total Assets...........		521,250	Total Liab. and Prop....		521,250

The normal cash balance of the company is $25,000.00. The Treasurer suggests one of the following courses in disposing of the cash not needed in the ordinary operations of the business:

(a) That an extra cash dividend of 25% be declared.

(b) That $50,000.00 be used to pay off half the bonds outstanding, which are subject to call.

(c) That $50,000.00 be used to purchase a building site adjoining the company's property, to provide for future expansion of the plant.

(d) That $50,000.00 of U. S. Government bonds be purchased.

(e) That $50,000.00 be used to buy a controlling interest in a company which produces one of the raw materials required in the manufacture of paper.

Explain the effect of each of these courses on the Balance Sheet. What other disposition of the surplus cash might be made?

— 13 —

The Controller of the J. C. Jung Paper Co. suggests one of the following appropriations of surplus:

(a) That the item goodwill, set up when the company purchased a going concern ten years ago, be written off.

(b) That a reserve of $50,000.00 be set up to provide for the retirement of bonds, and an additional $10,000.00 added to the reserve each year until the maturity of the bonds.

(c) That a reserve for contingencies amounting to $50,000.00 be set up.

(d) That a reserve for plant expansion of $50,000.00 be set up.

(e) That a reserve for pensions of old employes be set up.

Explain the effect of each of these courses on the Balance Sheet.

— 14 —

Of what advantage is a reserve for contingencies? What contingencies might such a reserve provide for in the case of the J. C. Jung Paper Co.?

— 15 —

The Langdon Automobile Sales Co. obtains the agency for a well-known make of automobile, depositing $25,000.00 cash with the automobile manufacturer. This deposit is to be retained by the manufacturer until the agency is surrendered, at which time it will be returned to the Langdon Automobile Sales Co. The agency contract runs indefinitely, but provides that it may be terminated by either party on six months' notice to the other. How will this agency deposit appear on the Balance Sheet of the Langdon Automobile Sales Co.? on the Balance Sheet of the manufacturer?

LABORATORY MATERIAL

Exercise No. 213

E. G. Miller, as sole proprietor, is engaged in the retail hardware business. He buys on account, the usual terms being 1/10, n/60. He takes all discounts offered. He sells for both cash and account, but offers no discount. He owns the building in which he conducts his business, but there is a mortgage equal to one-half of its value outstanding against it.

Miller forms a partnership with H. L. Darner under the firm name of Miller & Darner. The partnership engages in the retail hardware and furniture business. Mr. Miller has supervision of the hardware department, and Mr. Darner of the furniture department. Both sales and purchases are made on account. Furniture is sold on the instalment plan and notes taken in payment; these notes are discounted at the bank as soon as possible after they are received. Additional working capital is obtained by means of bank loans. The partners agree that twenty per cent of the yearly profits are to be retained in the business, and these are not to be distributed to the partners on the books. It is decided to maintain a delivery service for customers.

Miller and Darner incorporate under the name of The Miller Furniture Company. Forty per cent of the capital stock is preferred and the remainder common. Ten per cent of the preferred stock and twenty per cent of the common stock will not be issued at present. The new company decides to manufacture part of the furniture which it sells and accordingly purchases land, building, and equipment for that purpose. It issues bonds which are secured by a mortgage on its manufacturing plant. The corporation decides to reserve and set aside in a special account sufficient of the profits each year to be able to extend the plant and equipment to double its present size at the end of ten years.

INSTRUCTIONS: Prepare a Balance Sheet, supplying both items and amounts, for each of the following:

(a) E. G. Miller, sole proprietor.

(b) Miller & Darner, the partnership.

(c) The Miller Furniture Company, the corporation.

In preparing these Balance Sheets, it may be assumed in each case that the business has been in operation two years at the time the Balance Sheet is prepared.

Exercise No. 214

The Trial Balance of E. E. Spanabel, sole proprietor, on December 31, 19.., is shown on page 877.

E. E. SPANABEL

TRIAL BALANCE, DECEMBER 31, 19....

E. E. Spanabel, Capital		40,000
E. E. Spanabel, Personal	2,000	
Bank of Manhattan	1,200	
Cash on Hand	180	
Merchandise	17,200	
Repairs	175	
Bills Receivable	12,800	
Bills Payable		8,000
Real Estate	2,700	
Bank Stock	3,132	
General Expenses	3,720	
Freight	2,000	
Accounts Receivable	16,000	
Accounts Payable		20,000
Profit and Loss	6,893	
	68,000	68,000

The inventory of merchandise on December 31, 19.., is $30,000.00.

INSTRUCTIONS: 1. Assuming any information which you find necessary, prepare a Balance Sheet for E. E. Spanabel as of December 31, 19..... State as footnotes any assumptions which you make.

2. Write a letter to E. E. Spanabel suggesting such changes in his accounting methods as you think his Trial Balance shows should be made.

Exercise No. 215

The following ledger accounts give the assets and liabilities of the Taylor Manufacturing Company, December 31, 19..:

Cash	$ 10,000.00
Land	80,000.00
U. S. Government Bonds	100,000.00
Buildings	120,000.00
Accounts Payable	200,000.00
Notes Receivable	90,000.00
Reserve for Sinking Fund	30,000.00
Accrued Interest on Bonds Payable	2,000.00
Reserve for Depreciation on Buildings	10,000.00
Accrued Wages	1,000.00
Inventories:	
Raw Materials	120,000.00
Goods in Process	180,000.00
Finished Goods	105,000.00
Accrued Interest on Notes Receivable	5,000.00
Unexpired Insurance	8,000.00

(*Concluded on next page*)

Reserve for Federal Taxes	42,000.00
Accounts Receivable	300,000.00
Notes Payable	200,000.00
Bonds Payable	50,000.00
Mortgage on Building (5-yr. loan due in two yrs.)	20,000.00
Machinery and Equipment	220,000.00
Office Equipment	40,000.00
Notes Owed by Officers of Company	10,000.00
Notes Receivable Discounted	20,000.00
Reserve for Extensions	30,000.00
Prepaid Interest on Notes Payable	2,000.00
Advances to Salesmen	3,000.00
Investment in X Y Z Company	20,000.00
Investment in Stock of Subsidiaries	80,000.00
Reserve for Depr. on Machinery and Equip.	16,000.00
Reserve for Depr. on Furniture and Fixtures	4,000.00
Preferred Stock Authorized and Outstanding	200,000.00
Common Stock Authorized and Outstanding	400,000.00
Surplus	268,000.00

INSTRUCTIONS: Prepare a Balance Sheet for the Taylor Manufacturing Company as of December 31, 19....

CHAPTER LVIII

THE STANDARD FORM OF STATEMENT OF PROFIT AND LOSS

Definition and Purpose of Statement of Profit and Loss

It is customary to prepare for the use of executives and others a companion report to the Balance Sheet, stating the income and expenses of a business for a certain period of time and the difference between the two—the net profit or net loss for the period. This report is known by various titles such as the following: "Statement of Profit and Loss," "Summary of Income and Profit and Loss," "Profit and Loss Account," "Statement of Income and Expenses," "Statement of Income and Capital Account," "Statement of Revenue and Expenses," "Statement of Earnings and Expenses," and "Statement of Operations." Most of these titles are sufficiently descriptive to serve. In the published reports of corporations the title "Income Account" is often found. Many practitioners use the title "Statement of Income and Profit and Loss." If it is desired to describe the contents of the statement, it would seem that "Statement of Income and Expense" would be the most descriptive. The title in most prevalent use, however, as evidenced by the literature of accounting and the reports of smaller companies, is "Statement of Profit and Loss," and we will use this title in this discussion.

The primary purpose of the Statement of Profit and Loss is to provide information for the executives concerning income and expenses, so that these may be controlled and net income increased. If executives are to exercise proper control of the income- and expense-producing activities of the business, they must have a periodic report showing the net result of these interacting forces. The Statement of Profit and Loss serves this purpose.

The Balance Sheet shows the condition of affairs after certain changes have been brought about; the Statement of Profit and Loss serves to explain the causes of these changes. Each is complementary to the other, and, when read together, tell the history of the operations of a business for the period concerned. It is, of course, necessary that both the Balance Sheet and Statement of Profit and Loss be supported by detailed statements analyzing the totals shown on the summary reports.

Standard Form of Statement of Profit and Loss

In the recent movement for the standardization of financial reports, there does not seem to have been as near an approach to a standardization of the form of the Statement of Profit and Loss as there has been to the standardization of the form of the Balance Sheet. This results partly from the fact that business firms differ more in the nature of their incomes and expenses than they do in the nature of their assets and liabilities. Then, too, accountants vary more in their thinking on the nature and treatment of the various items of income and expense than they do with regard to assets and liabilities. An added reason for the greater lack of uniformity is the fact that much less emphasis is laid on the Statement of Profit and Loss in reports to stockholders, creditors, and others. Since less emphasis has been placed on it as a formal report, less attention has been given to its form and content. This has also prevented firms from studying the Statements of Profit and Loss of other companies to any considerable degree, and from profiting from their practices.

In the annual reports of corporations the Balance Sheet may be set forth in full, or, if condensed, supported by numerous schedules; whereas, the Statement of Profit and Loss in such a report is rarely more than the briefest summary of results. For example, a recent annual report of the International Harvester Corporation devotes nine pages to a carefully drawn Balance Sheet and the accompanying schedules, while the "statement of income" occupies a scant half-page and starts out with the figure of net operating revenue. Some of the annual reports of corporations contain no Statement of Profit and Loss at all.

Although it is hardly safe to say that there is a standard form of Statement of Profit and Loss, it is true that the Profit and Loss Statements prepared for similar businesses by professional accountants have many points of similarity. Accountants usually agree on the general form of the statement, but disagree on the position of some items of income and expenses, especially the latter. The customary form for a manufacturing or mercantile firm is made to show the following:

1. Gross returns from the sale of the commodity or service offered for sale by the business.

2. Sales deductions. These are subtracted from gross sales to obtain *net sales*.

3. Cost of goods sold. This is subtracted from net sales to obtain *gross profit on sales*.

4. Operating expenses. These are subtracted from gross profit on sales to obtain *net operating profit*.

5. Other income. This is added to net operating profit to obtain *gross income.* Items belonging to this group are sometimes termed "Other Income" or "Income Credits."

6. Deductions from income. These are subtracted from gross income to obtain *net income.*

There may be in addition to the foregoing a section for profit and loss credits and a section for profit and loss charges. When the former are added to net income and the latter subtracted, the balance represents the *net income carried to surplus* or the *net deficit chargeable to surplus.* Some accountants do not show profit and loss charges and credits on the Statement of Profit and Loss, but transfer them direct to the Surplus account, and show them on a Surplus Adjustment Statement.

Gross Returns from Sales

There is seldom a difference of opinion concerning the proper method of showing sales on the Statement of Profit and Loss. They are shown as the first item, and usually are shown gross, with the deductions from sales shown as a subtraction. The result is net sales. Sometimes only net sales are shown, the gross sales and deductions being omitted. This method conceals information of value to all inspecting the Statement of Profit and Loss; consequently its use is not to be commended.

Other terms than gross sales may be used on the Statement of Profit and Loss of some types of organization. For example, *gross earnings* may appear as the first item on the Statement of Profit and Loss of a professional firm, and *gross revenues* may appear as the first item on the Revenue and Expense Statement of a governmental organization.

Deductions from Sales

There is not unanimity of opinion as to what should be included under this head. It is generally agreed that sales returns and sales allowances should be included here, since they represent a direct deduction from the contract sales price. Some accountants treat cash discounts on sales as a deduction from sales, but the majority treat them as a deduction from income.

Some accountants treat "freight out" as a deduction from sales. It is contended that if "freight in" is to be shown as an addition to purchases, it is logical to treat "freight out" as a deduction from sales. If freight out is paid by the vendor on all goods sold, there is some logic to this contention, for the vendor will probably add the amount of the freight to what would otherwise be the sales price. But if, as is usually the case, the vendor pays freight out only on occasional shipments and pays this as a concession to new customers or to customers who are secured in

the face of stiff competition, it seems clear that this item is a selling expense somewhat similar in nature to advertising expense and should be so shown on the Statement of Profit and Loss.

Commissions are sometimes shown as a deduction from sales, but it seems better to show them as selling expenses, since they represent a cost of securing the sales contract. Excise and revenue taxes imposed at the time of sale may properly be treated as deductions from sales. Usually the vendor adds the amount of these to the regular sales price of the article and thus shifts them to the buyer. The vendor consequently acts only in the capacity of a collecting agency for the government. Customs duties, such as those imposed by tariff laws, are a part of the cost of purchases and should be added to the invoice price.

Cost of Goods Sold

In a mercantile business there is a fair degree of unanimity concerning the elements entering into the cost of goods sold. Since the beginning inventory, plus purchases, less ending inventory, equals cost of goods sold, the only probable chance for a difference of opinion is with reference to the elements entering into cost of goods purchased. It is unanimously agreed that the invoice price plus inward freight and cartage are properly included. It is also agreed that purchase returns and allowances should be deducted from the invoice cost of purchases.

There is a difference of opinion with reference to the treatment of cash discounts on purchases. Some contend that they are a deduction from purchases, but the majority treat them as *other income.* The method of showing them does not affect the final result shown by the Statement of Profit and Loss. The preferable method is that which gives the management the information which is most useful in controlling their amount.

In a manufacturing business the elements of cost are materials, labor, and manufacturing expense. There is little difference of opinion concerning the first two items. The same elements enter into the cost of materials which enter into the cost of the finished product of a mercantile firm. The labor cost includes all wages paid to those engaged in the fabrication of the materials into the finished product which can be connected directly with the product. There are a few questions with reference to the components of manufacturing expenses of which the most significant are the following:

1. Is interest on capital used in manufacturing operations an item of manufacturing cost?

2. Should any part of the general administrative expenses be allocated to manufacturing cost and shown as part of the manufacturing expenses?

The majority of accountants contend that interest is not an item of cost. They treat interest expense as a deduction from income, and do not take cognizance of interest on capital owned by the business. Whether or not interest should be considered as an item of cost depends to a considerable extent upon the purpose for which the cost data are to be used. In many cases it does not make much difference if it is clearly understood by those who are to use the information that interest is or is not included. Without entering at this time into a detailed discussion of the matter, it is the belief of the author that as a general rule cost of capital must be considered before the true cost of operations can be ascertained and that interest on capital used in carrying on production activities is part of manufacturing cost regardless of the source of the capital. For a discussion of the arguments for and against the inclusion of interest, the student is referred to standard texts on cost accounting.

The majority of accountants agree that administrative expenses should not be allocated to production cost, and with this opinion the author concurs. As a general principle, each department should be charged only for those expenses over which the executives of the department have control. Since the Production Department does not have control over administrative expenses, it seems better not to burden it with these expenses.

Expenses

The principal problem with reference to the presentation of information concerning expenses on the Statement of Profit and Loss is with reference to the method of classifying these expenses. Formerly, the orthodox method of classifying the major expenses of a business on the Statement of Profit and Loss was Selling Expenses and General Expenses. When this classification is used, a number of items of expense, such as sales discount and interest cost, are shown as deductions from income. During recent years, there has been some tendency by authors of accounting literature to recognize a third group termed Financial Management Expense and to place under this heading many of the items which were formerly placed under deductions from income.

The classification which is desired on the Statement of Profit and Loss depends to a considerable extent upon the size of the business and the form of its organization. We have seen in Chapter LVI that there is a tendency to classify the activities of a business into functional groups such as sales, production, finance, personnel, etc. No doubt as this form of business organization develops, there will be a tendency to classify expenses so as to show the total expenses incurred by each department.

Suggested Classification of Expenses

From the point of view of administrative control, expenses should be classified to conform with the organization of the business. In other words, expenses should be grouped according to units of responsibility, and the head of each executive unit should be held accountable for the expenses incurred in performing the activities he directs. A possible grouping of expenses for a business with a functional classification of administrative duties would be as follows:

1. *Manufacturing expenses*, or those incurred in the operation of the factory, and the production of the commodity or service which is offered for sale. These expenses would occur, of course, only in a manufacturing business.

2. *Buying expenses*, or those incurred in purchasing the commodity offered for sale, or in purchasing the materials and supplies used in production. The cost incurred in buying the supplies used by all the various departments is also included under this head, but the purchase cost of the supplies is charged to the department using the supplies.

3. *Selling expenses*, or those incurred in the marketing of the product purchased or produced for sale.

4. *Personnel expenses*, or those incurred in the procurement and maintenance of an efficient working force.

5. *Financial expenses*, or those incurred in planning and controlling the receipt, custody, and disbursement of funds. The expenses incurred in the granting of credit and the collection of accounts are usually included in this group.

6. *Controller's expenses*, or those incurred in the performance of the standards-and-record function. Under this heading is included the expense of the accounting, statistical, and office manager's department, the expenses of establishing and enforcing the procedures, in so far as this is done by the controller's department.

7. *General office expenses*, or those incurred in the general administration of the business and not chargeable to any of the foregoing groups. This group includes the expenses of the general manager and his staff.

8. *General* or *unallocated expenses*, or those not incurred as a result of the operations of any particular department, but which are necessary for the business to exist and operate as an entity. Directors' fees and expenses, capital stock tax, and income taxes are illustrations of such expenses. There may also be included in this group expenses which might logically be allocated to one of

the foregoing groups, but which it is not expedient to so allocate because of the cost involved or because of their relative unimportance.

The foregoing is only suggestive of a grouping of expenses suitable to a business having a well-defined functional organization. Modifications will have to be made for different businesses. If there is no controller or personnel manager, it may be necessary to set up a group of expenses termed *auxiliary* expenses and include under this heading the cost of maintaining the accounting, statistical, office manager's, and employment departments. Other modifications will suggest themselves. It is, of course, understood that there will be various items of expense shown under each of the major groups given in the foregoing classification. The essence of this classification is the method of analysis and classification it illustrates, rather than the particular groupings it shows.

Illustration of Standard Form of Statement of Profit and Loss

Sir Arthur Lowes Dickinson, C. P. A., in *Accounting Practice and Procedure,* offers a standard form of the Statement of Profit and Loss with suggested variations for different types of business. Because of the standing of Mr. Dickinson in the accounting profession in both the United States and England, this form may be taken as typical of that employed generally by practicing accountants. It is reproduced below.

The forms up to the point where net profits are ascertained will be as follows:

MANUFACTURING AND MERCHANDISING:

Gross earnings from sales	.... ..	
Less—Returns, allowances and discounts	.... ..	
Net earnings from sales		.... ..
Deduct—Cost of production of commodity or service		.... ..
Gross profit		.... ..
Deduct—Cost of selling	.... ..	
Expenses of management	.... ..	.... ..
Net profit from operations		.... ..

AGENCY AND COMMISSION:

Commissions earned		.... ..
Deduct—Expenses of management	.... ..	
Cost of guarantees	.... ..	.... ..
Net profit from operations		.... ..

TRANSPORTATION:

Earnings from operations		.... ..
Deduct—Operating expenses	.... ..	
Taxes	.... ..	.... ..
Net profit from operations or operating income		.... ..

BANKING:

Earnings from—		
Interest	.... ..	
Commissions	.... ..	
Other profits	.... ..	.... ..
Deduct—Expenses of operation and management		.... ..
Net profit from operations		.... ..

PROFESSIONAL:

Gross earnings from fees	.... ..	
Less—Out-of-pocket expenses included therein	.... ..	
Net earnings from fees		.... ..
Deduct—Expenses of operation and management		.... ..
Net profit from operations		.... ..

The form for the remainder of the statement will be the same in all cases, viz:

Net profit from operations		.... ..
Add Other Income		.... ..
Gross Income		.... ..
Deduct—Interest on bonds	.... ..	
Other fixed charges	.... ..	.... ..
Surplus for the year		.... ..
Extraordinary profits (detailed)		.... ..
Surplus brought forward from preceding year		.... ..
		.... ..
Deduct—Extraordinary charges		.... ..
Total surplus available		.... ..
Dividends on stocks		.... ..
Surplus carried forward		.... ..

Illustration of Detailed Statement of Profit and Loss

The Federal Reserve Board has suggested the standard form of the Statement of Profit and Loss shown in Illustration No. 133, for general use by all business firms seeking to borrow from banks which are members of the Federal Reserve System.

COMPARATIVE STATEMENT OF PROFIT AND LOSS FOR THREE YEARS, ENDING ...., 19....

	Year Ending		
	19...	19...	19...
Gross Sales....................................	....	....	....
Less outward freight, allowances, and returns........	....	....	....
Net sales....................................	....	....	....
Inventory beginning of year..........................	....	....	....
Purchases, net....................................	....	....	....
	....	....	....
Less inventory end of year..........................	....	....	....
Cost of sales....................................	....	....	....
Gross profit on sales..............................	....	....	....
Selling expenses (itemized to correspond with ledger accounts kept)..............................	....	....	....
Total selling expense..............................	....	....	....
General expenses (itemized to correspond with ledger accounts kept)..............................	....	....	....
Total general expense..............................	....	....	....
Administrative expenses (itemized to correspond with ledger accounts kept)..........................	....	....	....
Total administrative expense....................	....	....	....
Total expenses....................................	....	....	....
Net profit on sales..............................	....	....	....
Other income:			
Income from investments..........................	....	....	....
Interest on notes receivable, etc..................	....	....	....
Total other income..............................	....	....	....
Gross income....................................	....	....	....
Deductions from income:			
Interest on bonded debt..........................	....	....	....
Interest on notes payable..........................	....	....	....
Total deductions..................................	....	....	....
Net income—profit and loss..........................	....	....	....
Add special credits to profit and loss................	....	....	....
Deduct special charges to profit and loss............	....	....	....
Profit and loss for period..........................	....	....	....
Surplus beginning of period..........................	....	....	....
	....	....	....
Dividends paid....................................	....	....	....
Surplus ending of period..........................	....	....	....

Illustration No. 133, Statement of Profit and Loss of The Federal Reserve Board

Suggested Form of Statement of Profit and Loss Showing Functional Classification of Expenses

A Statement of Profit and Loss made in accordance with suggestions in this chapter but in condensed form is shown below:

THE BLANK MANUFACTURING COMPANY

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDED DECEMBER 31, 19....

Gross Sales		....
Deductions from Sales:		
Sales Returns	....	
Sales Allowances	....	....
Net Sales		....
Cost of Goods Sold (Appropriate details)		....
Gross Profit on Sales		....
Operating Expenses:		
Buying Expenses	....	
Selling Expenses	....	
Personnel Expenses	....	
Financial Expenses	....	
Controller's Expenses	....	
General Office Expenses	....	
General Expenses	....	....
Net Operating Income		....
Other Income:		
Interest on Notes Receivable	....	
Income from Real Estate	....	
Discount on Purchases	....	....
Gross Income		....
Deductions from Income:		
Interest on Notes Payable	....	
Loss on Sale of Real Estate	....	
Discount on Sales	....	....
NET INCOME		....

Illustration No. 134, Form of Statement of Profit and Loss Showing Functional Classification of Expenses

The author wishes to emphasize that the form of Statement of Profit and Loss given in Illustration No. 134, is not that ordinarily used by accountants but is offered as a suggestion of a possible development of this statement so as to make it of more service to business executives. The student, of course, should learn the standard form as used by the majority of accountants, and in his future accounting work will follow that form which is desired by those by whom he is employed.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

What reasons can you give for the greater need for the standardization of the Balance Sheet than of the Statement of Profit and Loss?

— 2 —

What are usually the principal items shown on the Statement of Profit and Loss submitted to stockholders? What is your opinion with reference to the adequacy of this statement? Would you as a stockholder desire more or less information? Why?

— 3 —

The King Corporation is a manufacturing business. The Jones Corporation is a mercantile business. Explain the difference between the items which will appear on the Statements of Profit and Loss of the two firms.

— 4 —

State the items you would expect to find on a Statement of Profit and Loss prepared for the following:

(a) The Hayman Real Estate Agency. This company buys and sells real estate on a commission, and rents property on the same basis.

(b) The Central Railroad Company, operating passenger and freight trains.

(c) The National City Bank.

(d) Anderson & Bowen, Certified Public Accountants.

— 5 —

Under what classification will the item Commissions Earned appear on the Statement of Profit and Loss of (a) a commission merchant, (b) a wholesale grocery company, (c) an employment agency, (d) an attorney who collects slow accounts in addition to his regular practice.

— 6 —

The Statement of Profit and Loss of the Boston National Bank shows "Interest" as an item of operating income. The New York Department Store shows it as a deduction from income. Explain.

— 7 —

The Statement of Profit and Loss of the International Mercantile Marine Company shows this item: "Balance, Being Profit for the Year, Before Providing for Depreciation on Steamships." What is your opinion of this statement? Where would you show depreciation on the Statement of Profit and Loss of this company?

— 8 —

On the Statement of Profit and Loss of the X Company, there appears under "Other Income" the following item: "Merchandise Discount—$600.00." An analysis shows that the sales discounts for the year are $2,200.00 and the purchases discounts are $2,800.00. Do you regard the method of the X Company in showing these discounts satisfactory? Why?

— 9 —

The total selling expenses of the Y Corporation for the year 1927 are $40,000.00. Of these, $32,000.00 are shown in a Miscellaneous Selling Expense account. What would you recommend?

— 10 —

At the end of the fiscal year, the profits of the Western Steel Company are $40,000.00. The Board of Directors declares a dividend of $20,000.00. (a) How will the dividend be shown in the accounts; on the Statement of Profit and Loss? (b) Under what conditions might it be omitted from the Statement of Profit and Loss? (c) How will the remaining $20,000.00 of profits be shown in the accounts; on the Statement of Profit and Loss?

— 11 —

The Eastern Manufacturing Company sells a large order of machinery to the Long Automobile Company. Several of the machines shipped to the Long Automobile Company are unsatisfactory, and are returned to the seller at the seller's expense. How will the freight on the returned machines be shown on the Statement of Profit and Loss?

— 12 —

You are requested to prepare in skeleton form a Statement of Profit and Loss to be used by the bookkeeper of a company in preparing periodical statements for the company. What would you desire to know before drawing up the form of the statement?

LABORATORY MATERIAL

Exercise No. 216

From the data given in Exercise No. 213, prepare in skeleton form a Statement of Profit and Loss for: (a) E. G. Miller, sole proprietor, (b) Miller & Darner, the partnership, (c) The Miller Furniture Company, the corporation.

Exercise No. 217

From the data given in Exercise No. 214, (1) prepare a Statement of Profit and Loss for E. E. Spanabel, sole proprietor; (2) prepare journal entries to close accounts of E. E. Spanabel.

Exercise No. 218

The American Automobile Co. manufactures and sells automobiles. In addition, it buys and sells automobile supplies of various kinds. Its Trial Balance as of December 31, 19..., is shown on page 892. The adjustments which affect the accounts on this Trial Balance are as follows:

Inventories, December 31, 19..:
- Raw Materials, $21,000.00
- Goods in Process, $7,000.00
- Automobiles Finished, $13,000.00
- Auto Supplies, $8,000.00

Accruals:
- Interest on Bonds, $2,000.00
- Interest on Notes Payable, $40.00
- Interest on Notes Receivable, $75.00
- Taxes (Estimated) $100.00

Unexpired Insurance $100.00

Depreciation:
- Buildings, 5% of original value
- Machinery and Tools, 10% on diminishing value
- Office Furniture, 10% of original cost

Reserve for Doubtful Accounts: 2% of sales

One-half of Advertising is to be carried to the next period.

Three-fourths of the expired insurance and taxes are to be charged to Manufacturing and the remaining one-fourth to Selling Expenses.

INSTRUCTIONS: 1. Prepare a Working Sheet.
2. Prepare a Balance Sheet.
3. Prepare a Statement of Profit and Loss.

AMERICAN AUTOMOBILE CO.
TRIAL BALANCE, DECEMBER 31, 19....

Land	20,000	
Buildings	50,000	
Machinery and Tools	40,000	
Office Furniture	700	
Notes Receivable	10,700	
Notes Receivable Discounted		6,000
Accounts Receivable	19,000	
Raw Materials Inventory, Jan. 1	20,000	
Goods in Process Inventory, Jan. 1	5,000	
Automobiles Inventory, Jan. 1	8,000	
Automobile Supplies Inv., Jan. 1	12,000	
First National Bank	8,600	
Petty Cash	140	
Bonds Payable 5% Mortgage		40,000
Reserve for Depreciation of Buildings		1,200
Reserve for Depr. of Mach. and Tools		1,000
Notes Payable		2,000
Accounts Payable		24,000
Capital Stock Authorized and Outstanding		100,000
Surplus		6,200
Treasury Stock	10,000	
Purchases, Raw Material	40,000	
Purchases, Auto Supplies	30,000	
Freight Inward, Raw Materials	2,450	
Freight Inward, Auto Supplies	1,340	
Freight and Cartage Outward	1,824	
Sales, Automobiles		131,130
Sales, Auto Supplies		58,960
Productive Labor	32,400	
Non-productive Labor	15,230	
Superintendence	3,420	
Heat, Light and Power	8,500	
Shop Supplies	2,490	
Miscellaneous Supplies	1,300	
Insurance	300	
Repairs to Machinery and Tools	2,146	
Taxes	400	
Advertising	3,420	
Sales Ret. and Allow., Automobiles	1,200	
Sales Ret. and Allow., Auto Supplies	882	
Discount on Sales	3,710	
Discount on Purchases		5,071
Salesmen's Salaries	6,570	
Salesmen's Traveling Expense	2,354	
Advances to Salesmen	450	
Office Salaries	8,630	
Legal Expense	540	
Stationery, Printing, and Postage	1,390	
Interest Cost	315	
Miscellaneous Selling Expense	160	
	375,561	375,561

(Trial Balance for Exercise No. 218.)

CHAPTER LIX

DIFFERENT TYPES OF FINANCIAL STATEMENTS

Need for Different Types of Statements

We have previously considered the standard financial statements used by mercantile and industrial companies. In some businesses it is necessary to vary these forms to some extent because of (a) the nature of their assets and liabilities, (b) the nature of their operations which affects the number and nature of the income and expenses, and (c) the use to be made of the statements. It is the purpose of this chapter as well as of the following one, to discuss and illustrate a few of these variations.

The Statement of Condition of a Bank

Banks refer to the statement which shows their assets, liabilities and proprietorship as a "Statement of Condition" or a "Statement of Resources and Liabilities." The Statement of Condition of a bank differs from the Balance Sheet of an industrial firm in the following ways: (1) as to a terminology; (2) as to the number and nature of the assets and liabilities; (3) as to ratio between the different assets and liabilities. The most important of these differences are as follows:

1. The principal indebtedness of a bank is its liability to depositors for the funds they have deposited with it. A large part of these deposits is subject to withdrawal at the option of the depositor. This necessitates that the bank keep a large amount of cash on hand at all times. The law usually specifies the minimum amount that may be kept. The item of cash on the Statement of Condition of a bank will be much larger in proportion to the other assets shown thereon than is the same item on the Balance Sheet of a typical industrial firm.

2. A bank secures its principal income from loans to customers. The major part of these loans is made on short-time notes. It may loan the money to a customer and receive the customer's note, or it may discount the notes of others which the customer presents. These loans are shown on the Statement of Condition as "Loans and Discounts." This term corresponds to "Notes Receivable" on the Balance Sheet of the industrial firm. In most lines of business few notes are received, so the item Notes Receivable on the Balance Sheet is usually

small in proportion to the other assets. On the other hand, "Loans and Discounts" is the largest asset on the Statement of Condition of a bank, and often it is equal to all the other assets.

3. Banks require notes for all loans made; therefore, the item Accounts Receivable appears on the Statement of Condition only when there is accrued income, or customers have overdrawn their accounts. Banks will not permit overdrafts, except for a small amount, in the case of well-known customers.

4. Banks usually have a considerable amount of their funds invested in stocks and bonds. Under our present banking laws, national banks are required to purchase a certain amount of United States bonds before they can issue currency. Many banks purchase the stocks and bonds of industrials. If purchased wisely, these provide a good income and are readily salable in case the bank needs funds. Money loaned on notes can not be recovered until the notes fall due, but funds invested in listed securities can be recovered at any time by selling the securities. For these reasons, "Investments" is usually a large item on the Statement of Condition of a bank. On the other hand, it does not appear at all on the Balance Sheet of many industrials, and when it does appear, it is usually small in proportion to the total assets. Of course this may not be true in the case of a holding company.

5. The fixed assets of a bank are usually small in proportion to its total assets. A bank may own the building in which it is located, but its value compared with the value of all the assets is usually small.

6. Many banks have no fixed liabilities. Sometimes a bank may give a mortgage on its bank building, or, in the case of very valuable property, may issue bonds secured by this property.

7. The surplus of a bank is usually larger in proportion to its capital than is the surplus of the industrial firm. This is due to two reasons: (1) Banks are usually required by law to retain a certain percentage of their profits each year until the surplus has reached a certain amount of their capital, usually twenty-five per cent; (2) the surplus thus built up is not subject to distribution as dividends. Most banks increase their surplus beyond the legal requirements in order to increase their working capital and to provide additional security to depositors.

8. When a bank transfers profits to its Surplus account, it is usually with the intention of leaving these profits in the business permanently. Because of the permanent nature of the Surplus account, the bank may set up an "Undivided Profits" account to which it transfers the profits from which it expects to declare dividends. Few business firms have the item of Undivided Profits on their Balance Sheet, although it may appear on the Balance Sheet of a partnership.

The Standard Form of Bank Statement

The standard form of bank statement used by nearly all banks for purposes of publication, is very well illustrated below.

Fifty-eighth Annual Statement

UNION TRUST COMPANY

CHICAGO

At the close of business December 31, 1926

RESOURCES

Loans and Discounts		$ 55,982,758.40
Overdrafts		1,307.60
Customers' Liability on Acceptances		675,338.21
Customers' Liability under Letters of Credit		394,064.46
Earned Interest not Collected		239,238.80
Building and Leasehold		1,360,115.75
Bonds and Stocks, including Federal Reserve Bank Stock		6,118,429.85
U. S. Government Securities		4,192,957.23
Cash on Hand and Due from Banks		17,754,053.17
		$ 86,718,263.47

LIABILITIES

Capital Stock		$ 3,000,000.00
Surplus		3,000,000.00
Undivided Earnings		1,407,846.65
Reserves for Accruing Interest, Taxes, Expense, and Dividends		344,789.48
Reserves for Depreciation and Other Contingencies		600,075.60
Unearned Interest		225,005.56
Liability on Customers' Acceptances		707,471.21
Liability under Letters of Credit		403,441.71
Liability to Federal Reserve Bank		None
Deposits — Commercial	$ 54,260,878.35	
Due to Banks	12,499,764.56	
Savings	10,268,990.35	77,029,633.26
		$ 86,718,263.47

Illustration No. 135, Statement of Condition of a Bank

Illustration of Bank Statement with Explanation of Asset and Liability Items

Banks do not arrange their asset and liabilities in a uniform order. A different arrangement from that shown in Illustration No. 135 is shown by Illustration No. 136. This Statement of Condition is very interesting, since it gives an explanation of the asset and liability items which are peculiar to a bank.

MIDWAY TRUST COMPANY, CHICAGO, ILLINOIS

STATEMENT OF CONDITION, DECEMBER 31, 19....

Assets		
CASH ON HAND.................................. (Gold, other coin and currency)	1,097,107	77
CASH IN BANKS AND EXCHANGES.................... (Our balance with the Federal Reserve Bank and other banks, and checks deposited by our customers in process of collection)	19,605,077	82
FOREIGN EXCHANGE.............................. (Assured dollar value of our balances abroad, and of our holdings of prime foreign bills of exchange after payment at maturity)	2,179,391	38
U. S. GOVERNMENT BONDS AND NOTES..............	3,215,243	60
STATE AND MUNICIPAL BONDS......................	1,950,927	24
SHORT-TERM SECURITIES.......................... (Our investments in obligations of railroad and industrial corporations, payable at a near date and readily salable)	4,026,139	86
OTHER BONDS AND STOCKS......................... (Our investments in readily salable securities)	9,951,667	10
LOANS AND BILLS PURCHASED...................... (Loans amply secured, and notes of concerns of highest standing and financial rating)	56,994,348	87
CHICAGO MORTGAGES.............................. (First mortgages on improved property in Chicago)	4,490,649	86
REAL ESTATE.................................... (Banking buildings—lower floors, used for our business—upper floors, rented to the public)	3,946,372	51
CUSTOMERS' LIABILITY ON ACCEPTANCES AND COMMERCIAL LETTERS OF CREDIT.................. (Obligation of our customers to reimburse us for (1) commercial drafts accepted by us, payable at a future date, (2) engagements to pay or come under acceptance on presentation of specified commercial documents here or abroad)	11,436,233	67
ACCRUED INTEREST RECEIVABLE.................... (Net interest accrued on loans and investments but not yet payable)	386,138	30
Total Assets..............................	119,279,297	98

Illustration No. 136, Statement of Condition of a Trust Company

Discussion of Specific Items on Bank Statement

With reference to a few of the items appearing on the Statement of Condition, shown in Illustration No. 136, a few additional words of explanation may well be given

1. *Cash in Banks and Exchanges.* Under the Federal Reserve Law, all members of the Federal Reserve System must keep some

MIDWAY TRUST COMPANY, CHICAGO, ILLINOIS

STATEMENT OF CONDITION, DECEMBER 31, 19...

Liabilities		
DUE DEPOSITORS....................................	91,674,987	70
(Funds deposited with us as follows: (a) checking accounts; (b) deposits for a fixed time or on thirty-one days' notice; (c) for trust or other purposes)		
MORTGAGE ON REAL ESTATE..........................	115,250	
(Existing mortgage on property recently purchased by this company for banking premises)		
RESERVE FOR TAXES................................	458,650	27
(Proportionate amount accrued for taxes, figured as though now due)		
BILLS PAYABLE....................................	2,000,000	
(Our obligation to pay the Federal Reserve Bank, secured by Liberty Bonds as collateral)		
ACCEPTANCES......................................	10,158,514	97
(Commercial drafts accepted by us against domestic and foreign shipments of merchandise payable at a future date)		
COMMERCIAL LETTERS OF CREDIT.....................	1,277,718	70
(Our engagements to pay or come under acceptance on presentation of specified commercial documents either here or abroad)		
REDISCOUNTS......................................	920,393	71
(Acceptances sold in the local open market or discounted abroad, bearing the endorsement of this company)		
ACCRUED INTEREST PAYABLE.........................	65,498	98
(Amounts set aside to meet interest due on deposits)		
Total Liabilities...............................	106,671,014	33
LEAVING CAPITAL, SURPLUS AND UNDIVIDED PROFITS...	12,608,283	65
Total Liabilities and Capital...................	119,279,297	98

Illustration No. 136, Statement of Condition of a Trust Company

funds on deposit with the central reserve bank of the district in which the member bank is situated. Banks keep funds on deposit with banks in other cities in order that they may draw drafts on these banks. When checks on other banks are deposited by customers, they are collected through the clearing house of the two cities in which the banks are situated. Until they are collected, they must be recorded in the records and on the financial statements. Some banks show such items under the heading of "Due from Other Banks" instead of under the heading employed by the Midway Trust Company.

2. *Foreign Exchange.* This item is composed of the following:

  a. Funds on deposit in foreign banks.
  b. Bills of exchange owned by the bank which are payable in the currency of foreign countries.

Large banks keep funds on deposit with foreign banks so that they can draw foreign bills of exchange or drafts in the same manner as they keep funds on deposit with domestic banks so that they can draw domestic bills of exchange. In arriving at the value of these deposits and foreign bills of exchange, it is necessary to take into consideration their value in United States currency. This value is affected by the prevailing rate of exchange between the two countries. Their value in United States money is termed their "dollar" value, since the dollar is the standard of value in the United States.

3. *Investments.* The investments are carefully classified so that their nature is clearly shown. This is a desirable procedure and is much to be preferred to the practice of some banks of showing all such items under the heading of "Investments."

4. *Loans and Bills Purchased.* This item includes loans made to customers and notes discounted for customers. It may also include short-time notes purchased from note brokers. On the statements of many banks, this item is termed "Loans and Discounts."

5. *Customers' Liability on Acceptances and Commercial Letters of Credit.* Merchants often arrange with their bankers for the latter to accept drafts drawn by them on the bank in payment of merchandise purchased. In some cases the bank issues to the customer a "letter of credit" which states that the bank will accept drafts drawn by the customer not exceeding a certain amount upon the presentation of the proper documents. The documents required are usually a bill of lading and the accompanying papers which show that goods have been purchased and shipped to the customer who draws the draft. By presenting the letter of credit, the merchant can establish his authority to draw the draft on the bank, and the vendee of the goods is therefore willing to accept the draft in payment.

When a bank accepts a draft drawn by a customer or issues a letter of credit to the customer, it records the liability of the customer to the bank as an asset and the liability of the bank on the draft or letter of credit as a liability. When the draft falls due, it is paid by the bank and charged against the account of the depositor. The bank charges the depositor interest on the amount of the draft from the time it is accepted by the bank until it is paid. It thus makes a profit from the transaction.

6. *Reserve for Taxes.* This item shows the estimated amount of the taxes accrued to date. It might more appropriately be shown as "Accrued Taxes" as this would more clearly indicate its nature.

THE CORN EXCHANGE BANK, NEW YORK

STATEMENT OF NOVEMBER 15, 19....

THE BANK OWES TO DEPOSITORS................	$200,740,182.19
(A conservative banker always has this indebtedness in mind, and he arranges his assets so as to be able to meet any request for payment)	
FOR THIS PURPOSE WE HAVE:	
I. Cash..................................	38,705,966.62
(Gold, bank notes and specie, and with legal depositories returnable on demand)	
II. Checks on Other Banks....................	25,860,870.01
(Payable in one day)	
III. U. S. Government Securities................	43,537,226.90
IV. Loans to Individuals and Corporations......	30,306,163.10
(Payable when we ask for it, secured by collateral of greater value than the loans)	
V. Bonds..................................	16,532,225.85
(Of railroads and other corporations, of first quality and easily salable)	
VI. Loans..................................	56,652,893.74
(Payable in less than three months on the average, largely secured by collateral)	
VII. Bonds and Mortgages on Real Estate........	979,298.16
VIII. Twenty-three Banking Houses..............	3,636,751.12
(All located in New York City)	
Total to Meet Indebtedness..............	$216,211,395.50
IX. This Leaves a Surplus of..................	$ 15,471,213.31
(Which becomes the property of the stockholders after the debts to the depositors are paid, and is a guarantee fund upon which we solicit new deposits and retain those which have been lodged with us for many years)	

Illustration No. 137, Statement of Condition of the Corn Exchange Bank, New York

7. *Acceptances and Commercial Letters of Credit.* These items offset the asset item of "Customers' Liability on Acceptances and Commercial Letters of Credit" which has been explained.

8. *Rediscounts.* This item represents the contingent liability of the bank on acceptances of other companies which it has purchased and resold with its endorsement. The bank follows the conservative practice of setting up this contingent liability on its reports. This item is offset by including the acceptances discounted as an asset on the asset side of the Statement of Condition.

A Novel Form of Bank Statement

A novel form of statement is shown in Illustration No. 137. It will be noted that the only liabilities shown on this statement are those to depositors. Since the bank must have some liabilities to others than its depositors, using that term in its usual sense, it must be assumed that it has included these liabilities under the heading "The Bank Owes to Depositors." It seems that it might be well to revise the statement to read:

THE BANK OWES TO:		
(a) DEPOSITORS.................	$.............	
(b) OTHERS....................	....	
TOTAL.....................		$200,740,182.19

The tendency indicated by the statements of the Midway Trust Company and the Corn Exchange Bank to make financial reports more easily understood is admirable and should be encouraged by business men and accountants. Business firms might well follow the example of these banks in making reports to their stockholders and creditors.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

On the Balance Sheet of an industrial firm all notes received from customers are entered as "Notes Receivable." Banks receive many notes from their customers, but on their Statement of Condition the term "Notes Receivable" does not appear. Explain.

— 2 —

The ratio of cash to total assets on the Statement of Condition of a bank is much larger than the ratio of cash to total assets on the Balance Sheet of an industrial firm. Explain.

— 3 —

What is usually the largest asset of a bank? Why?

— 4 —

In most businesses the accounts receivable are much larger than the notes receivable. Is this true in the case of a bank? Why?

— 5 —

The item of "Investments" does not appear on the Balance Sheet of many industrial firms, and, when it does appear, it is usually small in amount. On the other hand, it is usually a large item on the Statement of Condition of a bank. Explain.

— 6 —

Why are the fixed assets of a bank small in proportion to its total assets?

— 7 —

On which would you expect to find the item of fixed liabilities the larger, the Balance Sheet of a manufacturing firm or the Statement of Condition of a bank?

— 8 —

On the Statement of Condition of the Bank of the Manhattan Company the following items appear:

Surplus	$12,500,000.00
Undivided Profits	3,974,460.45

Explain the meaning of these items.

— 9 —

The Statement of Condition of the Midway Trust Company, contains the following item:

Cash in Banks and Exchange $19,605,077.82

Explain where this cash may be located and why it is kept at each place.

— 10 —

The same statement contains this item:

Foreign Exchange................ $2,179,391.38

Explain the meaning and purpose of this item.

— 11 —

Explain fully the meaning of this item:

Customers' Liability on Acceptances
and Commercial Letters of Credit. $11,436,233.67

— 12 —

On the Statement of Condition of the Midway Trust Company there appears the following item: "Reserve for Taxes, $458,650.27." Explain the purpose of this item. How else might this item be shown?

— 13 —

Mr. Jones plans to go to South America to purchase goods. Mr. Jones is not known personally to the merchants from whom he expects to buy. He asks his local bank to explain how he may arrange to pay for his purchases without inconvenience to himself or those with whom he trades. Explain the method which the bank will probably advise him to follow.

— 14 —

If Mr. Jones accepts the advice of his bank, what effect will his action have on the Statement of Condition of the bank?

— 15 —

The Merchants Bank has a large amount of its funds invested in notes of customers. It needs some additional cash. How may it obtain these funds from these notes? How will this action be shown in its Statement of Condition?

LABORATORY MATERIAL

Exercise No. 219

The ledger of the State Bank of New York shows the following asset, liability and proprietorship balances on December 31, 19...:

Capital Stock	$ 2,500,000.00
Loans and Discounts	55,404,235.80
Banking House	725,961.00
Surplus and Undivided Profits	2,615,367.03
Cash and Exchanges	12,928,717.25
Due Depositors	80,025,823.75
Customers' Liability Account of Acceptances and Letters of Credit	1,124,456.35
Acceptances and Letters of Credit	1,124,456.35
U. S. and Municipal Securities	6,910,231.03
Other Securities	9,172,045.70

INSTRUCTIONS: Prepare a Statement of Condition for the State Bank as of December 31, 19..... In preparing this statement follow the form shown in Illustration No. 135.

Exercise No. 220

The ledger of the United States Trust Company of New York shows the following asset, liability and proprietorship balances on January 1, 19...:

Deposits	$47,452,424.56
Accrued Interest Receivable	431,623.60
Time Loans on Collateral	10,092,432.00
Interest Accrued on Deposits	515,023.32
Stock and Bonds Investments	10,489,780.00
Demand Loans on Collateral	22,062,972.98
Unearned Interest on Bills Purchased	44,453.44
Reserved for Taxes and Expenses	208,000.00
Cash in Vault and in Banks	9,557,636.65
Undivided Profits	2,717,786.61
Real Estate Owned	1,000,000.00
Bills Purchased	6,477,369.58
Surplus	12,000,000.00
Capital Stock	2,000,000.00
Bonds and Mortgages	4,825,873.12

INSTRUCTIONS: 1. Prepare a Statement of Condition for the United States Trust Company of New York as of January 1, 19..... In

preparing this statement follow the form shown in Illustration No. 136. The explanation of items will be omitted.

2. The United States Trust Company formerly has had its reports prepared in the form shown in Illustration No. 135. Write a brief report addressed to the President of the United States Trust Company explaining the nature of the change you have made in the form of the statement and the reason for this change. In this same report suggest any changes in terminology which you think desirable.

Exercise No. 221

Construct the statement which you prepared in the foregoing exercise to correspond to the form of statement shown in Illustration No. 137.

Exercise No. 222

The President of the United States Trust Company has not been engaged in banking prior to his election to his present position. He is unfamiliar with the banking terminology which you have used in the Statement of Condition which you prepared in Exercise No. 221. In compliance with his request, write a report addressed to him, explaining clearly the meaning of each item which appears on the Statement of Condition which you previously submitted.

CHAPTER LX

DIFFERENT TYPES OF FINANCIAL STATEMENTS
(Continued)

Balance Sheet of a Public Utility

The operations of a public utility are in some respects quite different from the operations of the typical industrial company, and these differences are reflected to some extent on its Balance Sheet. Illustration No. 138 shows the Balance Sheet of an electric light and power company.

The items which are peculiar to such a company will be discussed briefly.

Goodwill and Franchises

The goodwill and franchises item will usually show the cost of obtaining the franchise to operate in the locality where the utility is located less any amounts which have been written off over the life of the franchise. Many utilities do not write off the items of franchise and goodwill and leave them as an asset in the Balance Sheet on the theory that even though the franchise will later expire, the service which the utility renders to the community is a necessity and consequently the franchise will be renewed. In many instances the value of the goodwill and franchise item is ascertained by appraisals made by utility engineers and operators.

Accounts Receivable

The accounts receivable of a utility are mainly of two classes—those due from consumers of current and those due from purchasers of electrical equipment. In almost all cases the amount shown as due from consumers is not the balance actually due at the close of the period but that due up to the date of the last reading of meters. If some meters are read each day during the month, the accounts receivable may be understated by the amount estimated to be due for the period from the reading of each of these meters to the end of the month. Some companies carry an estimated amount in their Balance Sheet for this item, while others take no cognizance of it.

THE CITY LIGHT AND POWER COMPANY

BALANCE SHEET, DECEMBER 31, 1926

Assets					
PROPERTY:					
Gross value		4,184,516	72		
Less reserve for depreciation		641,888	33		
Net property				3,542,628	39
GOODWILL AND FRANCHISES				276,826	62
CURRENT ASSETS:					
Cash		81,848	95		
Receivables:					
Notes receivable	4,863.21				
Accounts receivable:					
Consumers	66,911.28				
Merchandise	32,563.37				
Other	2,761.88				
Total	107,099.74				
Less reserve for bad debts	3,809.24				
Net receivables		103,290	50		
Inventories:					
Materials and supplies	48,818.77				
Electrical merchandise	24,009.52				
Total inventories		72,828	29		
Total current assets				257,967	74
DEPOSIT WITH CITY				10,000	
DEFERRED CHARGES:					
Unamortized bond discount and expense		128,917	82		
Apportionment accounts		6,551	12		
Total deferred charges				135,468	94
TOTAL ASSETS				4,222,891	69

Illustration No. 138, Balance Sheet of a Public Utility

Almost all power companies are now selling electrical equipment to their customers. The "Merchandise Receivable" item shown in the Balance Sheet represents the amounts due from purchasers of such equipment on the closing date. These items are generally paid in instalments over a period of from eight to twelve months; this accounts for the large amount shown on the Balance Sheet.

Electrical Merchandise

The Electrical Merchandise account represents the value of goods which the utility considers it necessary to have on hand in order to furnish customers with what they desire to purchase. The items most frequently carried in stock are electric toasters, floor lamps, electric irons, and other equipment.

Deposit with City

In many cases the franchise granted to a utility requires the deposit with the city of amounts which are to be held subject to

THE CITY LIGHT AND POWER COMPANY

BALANCE SHEET, DECEMBER 31, 1926

Liabilities and Net Worth				
FIRST MORTGAGE 6% GOLD BONDS				
Due January 1, 1951			3,000,000	
CURRENT LIABILITIES:				
Notes payable	20,000			
Accounts payable - trade creditors	46,938	76		
Consumers' deposits	6,325			
Line extension deposits	17,156	82		
Accrued accounts:				
Salaries and wages	3,510	91		
Local taxes	4,976	29		
Federal income taxes	12,919	33		
Interest on funded debt	90,000			
Interest on notes payable	400			
Total current liabilities			202,227	11
RESERVES:				
Injuries and damages	6,758	37		
Renewals and replacements	18,761	40		
Contingencies	15,000			
Prepayments of electricity bills	2,781	44		
Total reserves			43,301	21
NET WORTH:				
Preferred capital stock				
(5,000 shares of $100.00 par value)	500,000			
Common capital stock				
(10,000 shares of no par value)	419,311	73		
Surplus	58,051	64		
Total net worth			977,363	37
TOTAL LIABILITIES AND NET WORTH			4,222,891	69

Illustration No. 138, Balance Sheet of a Public Utility

forfeit if the utility does not perform the full responsibilities placed on it by the franchise. In some cases these deposits are required as an indemnity against the failure to repair streets that have been torn up or as a fund out of which to pay damages to persons injured.

Consumers' Deposits

Very often utilities require consumers to make a deposit as security for their monthly bills. These deposits vary in amount from perhaps $2.00 to $10.00 and will be forfeited to the company if payments for current are not made. This item on the Balance Sheet states the liability of the company for such deposits.

It is maintained by some accountants that this item should be classified as a deferred credit rather than as a current liability for the reason that these deposits will not be returned to a consumer so long as current is used, and that if such returns are made they are small in proportion to the total deposit of consumers in the locality and will generally be made up by other

deposits from other consumers who occupy the residence or building where current is furnished. This contention does not seem reasonable, however, for at no time will the company be able to treat these amounts as income, so they lack the primary essential of a deferred credit.

An item quite similar to the consumer deposits is the line extension deposits which are made by the consumers at the request of the utility as a payment for the extension of electric lines into outlying districts of a community where the small number of users makes it unprofitable for the utility to extend its lines if it is necessary for it to pay the total cost of making such extensions. The disposition of the individual deposits, upon completion of the extension, is generally made either to Surplus or to a reserve, but sometimes to the Property account, depending upon the instructions of the State Utility Commission.

Arrangement of Assets and Liabilities

It will be noted that in the Balance Sheet of this company, the fixed assets are shown prior to the current assets and that the fixed liabilities are shown prior to the current liabilities. It is the opinion of the author that in most companies it is preferable to show current assets and current liabilities at the top of the asset and liability sides of the Balance Sheet respectively. In the case of a public utility, however, there is some argument for following the plan shown in Illustration No. 138. In almost all utilities the fixed assets are by far the predominating item on the Balance Sheet. While current assets and current liabilities are of importance, the relationship between current assets and current liabilities is less important than in the ordinary trading or manufacturing company. The inflow of cash into a public utility is certain to be quite regular both as to time and amount, and the normal operating expenses of the company for which it is liable at any time are also quite regular. This condition is promoted by the fact that the utility usually enjoys a monopoly in its community. There is less need, therefore, for emphasizing the current assets and liabilities on the Balance Sheet. On the other hand the utility is constantly making large expenditures for improvements to its properties and usually funds for the payment of these improvements are secured through the issuance of additional bonds. As a consequence it is quite important that careful attention be given to changes in the fixed assets and liabilities.

The Statement of Affairs

In the preparation of a Balance Sheet, it is assumed that the business for which it is prepared is to continue in operation.

Accordingly the assets are stated at their value to a going concern and the liabilities are listed without reference to the priority of their claim on the assets since it is assumed that all liabilities will be paid. But the financial condition of a firm may be such that it can not continue to operate. It may have insufficient property to pay its debts and may be forced to liquidate and distribute the proceeds derived from the liquidation to its creditors. Before the liquidation takes place, it is customary to prepare a statement which indicates to the creditors the probable results of the liquidation. This statement is usually termed a "Statement of Affairs."

The Statement of Affairs differs from the Balance Sheet (1) with reference to the method of valuing the assets, and (2) with reference to the order in which the liabilities are listed. It shows the assets valued at the amount it is expected will be realized from their sale. This may be less or more than their value to the business as a going concern.

To illustrate, furniture and fixtures costing $550.00 may have an estimated life of ten years and a scrap value of $50.00. If the straight-line method of depreciation is used, $50.00 will be charged for depreciation each year. At the end of five years $250.00 will have been credited to the Reserve for Depreciation account and the asset will have a book value of $300.00. This is the value at which it will be placed on the Balance Sheet of the firm. If the firm is forced to liquidate, it is very possible that the furniture and fixtures can not be sold for more than $200.00. Second-hand equipment must usually be sold at a low price. On the Statement of Affairs, the furniture and fixtures will be stated at $200.00, since this is its value in liquidation. On the other hand, the business may have purchased land ten years ago for $20,000.00 which now has a sale value of $25,000.00. On the Balance Sheet, the land will be shown at its cost of $20,000.00, but on the Statement of Affairs it will be shown at its sale value of $25,000.00. In the same manner the estimated sale price of each asset will be determined and shown on the Statement of Affairs. In the case of most assets, this will be less than the book value.

On the Balance Sheet, the liabilities are usually listed in the order in which they will be paid. On the Statement of Affairs, they are listed in the following order:

1. Unsecured claims.
2. Fully secured claims.
3. Partially secured claims.
4. Preferred claims.

Illustration of the Statement of Affairs

On September 30, 19.., Colby & Hodge, announce their inability to meet their obligations and make an assignment for the benefit of their creditors. From their records the following financial statement is prepared:

Assets	
Cash on Hand	$ 4,500.00
Notes Receivable	9,000.00
Accounts Receivable	3,000.00
Merchandise Inventory	22,000.00
Stocks and Bonds	35,000.00
Deficiency	7,300.00
Total Assets	$80,800.00
Liabilities	
Accounts Payable	$32,000.00
Notes Payable—Merchandise Creditors	26,000.00
Notes Payable—Bank	22,000.00
Taxes and Wages of Employes	800.00
Total Liabilities	$80,800.00

From an examination of the records, it is found that the Profit and Loss account has a debit balance of $18,800, which represents the losses to date. The amount to the credit of Colby's Capital account is $13,000.00, but his drawing account shows a debit balance of $10,500.00. Hodge's Capital account shows a credit of $19,000.00, and his drawing account has a debit balance of $10,000.00. From this information, it can be seen that the deficiency shown in the financial statement is obtained as follows:

Trade Losses as per Profit and Loss Account			$18,800.00
Colby Capital Account	$13,000.00		
Colby Drawing Account	10,500.00	$2,500.00	
Hodge Capital Account	$19,000.00		
Hodge Drawing Account	10,000.00	$9,000.00	
Total Balance of Capital Accounts			11,500.00
Deficiency			$ 7,300.00

It is estimated that $1,000.00 of the accounts receivable are worthless; that $500.00 of the remainder are doubtful and from these it is expected to realize $200.00. From the inventory of $22,000.00, it is expected to realize $17,000.00. The stocks and bonds are in the hands of creditors pledged to secure the payment of notes. Of these, $25,000.00 are in the hands of banks as security for the $22,000.00 of notes due to banks and $10,000.00 are

in the hands of merchandise creditors as part security for the $26,000.00 of notes due them.

The Statement of Affairs for Colby & Hodge will be as in Illustration No. 139.

COLBY & HODGE

STATEMENT OF AFFAIRS, SEPTEMBER 30, 19....

	Book Value		Expected to Realize	Deficiency
Assets				
Cash on Hand..............	4500		4500	
Notes Receivable...........	9000		9000	
Accounts Receiv.—Good....	1500		1500	
Accounts Receiv.—Doubtful.	500		200	300
Accounts Receiv.—Bad.....	1000			1000
Merchandise Inventory......	22000		17000	5000
Stocks and Bonds...........	25000	25000		
Less: Fully Secured Liab....		22000	3000	
Stock and Bonds in Hands of Partly Secured Creditors (See Contra)..............	10000			
Total....................	73500		35200	6300
Deduct Preferred Creditors..			800	
Balance Available for Unsecured Creditors...........			34400	
Deficiency.................			13600	
			48000	
	Book Value		Expected to Rank	
Liabilities				
Accounts Payable...........	32000		32000	
Notes Payable—Mdse. Cred.	26000	26000		
Less: Security, Stocks and Bonds....................		10000	16000	
Notes Payable—Banks......		22000		
Stocks and Bonds as Security		25000		
Free Assets (See Contra)....		3000		
Taxes and Wages (See Contra)	800			
Total Unsecured Claims.			48000	

Illustration No. 139, Statement of Affairs

From this statement it can be seen that, if the assets can be sold for the estimated amount, there will be available $34,400.00 for settlement of the claims of the unsecured creditors which

amount to $48,000.00. The unsecured creditors, therefore, will realize a little more than seventy-one per cent of their claims.

The Statement of Affairs at best is only an estimate and therefore should be used with judgment. If properly prepared, it is of value in indicating to creditors what they may expect to realize from liquidation. A consideration of the Statement of Affairs may indicate to creditors that it will be wiser to continue the operations of the business than to liquidate it immediately. Under such conditions, they will have the business continued under the control of a receiver selected by them. As an illustration of a condition when it may be desirable to continue the business: the insolvent company may be a manufacturer with a large amount of partly finished goods on hand. If the company ceases operations, it may be necessary to sell this partly manufactured material for scrap. It may be more profitable to continue the operations of the business until these partly manufactured goods are completed so that they can be sold for finished product instead of scrap. There are other conditions which may make the temporary continuation of the operations of a business profitable.

The Deficiency Statement

The Statement of Affairs may be supplemented by the "Deficiency Statement." The Deficiency Statement discloses how the deficiency shown by the Statement of Affairs has been caused. It is customary to prepare the Deficiency Statement in account form, but there is no reason why it may not be prepared in report form. The Deficiency Statement for Colby & Hodge in account form is as in Illustration No. 140.

COLBY & HODGE

DEFICIENCY STATEMENT, SEPTEMBER 30, 19....

Sundry Losses as per Profit & Loss Account		18800	*Capital:*		
			Colby........	13000	
			Hodge........	19000	32000
Loss on Realization:			*Deficiency as per Statement of Affairs.....*		13600
Accounts Receivable....	1300				
Merchandise..	5000	6300			
Partners' Drawings:					
Colby Draw. .	10500				
Hodge Draw. .	10000	20500			
		45600			45600

Illustration No. 140, Account Form of Deficiency Statement

The same information may be shown in report form as in Illustration No. 141.

COLBY & HODGE

DEFICIENCY STATEMENT, SEPTEMBER 30, 19....

LOSS ON REALIZATION OF ASSETS AS SHOWN BY APPRAISAL:			
Accounts Receivable		1300	
Merchandise		5000	
			6300
SUNDRY LOSSES:			
Profit and Loss Account			18800
Total Losses			25100
CAPITAL OF PARTNERS:			
Colby	13000		
Hodge	19000	32000	
WITHDRAWALS:			
Colby	10500		
Hodge	10000	20500	
Net Capital			11500
Deficiency as per Statement of Affairs			13600

Illustration No. 141, Report Form of Deficiency Statement

The Statement of Affairs and the Deficiency Statement are complements of each other. They are of limited use and are of chief interest to the public practitioner who may be engaged in a professional capacity in connection with an insolvent business. The preparation of these two statements has been called for frequently in the Certified Public Accountant examinations given by the various states. In these examinations the Deficiency Statement is often termed the "Deficiency Account."

The Statement of Earnings of a Bank

The "Statement of Earnings" of a bank corresponds to the Statement of Profit and Loss of an industrial firm. The Statement of Earnings is shown in skeleton form in Illustration No. 142.

The items appearing on this statement are self-explanatory. The expenses, if desired, may be classified to indicate their nature, but this information is usually shown by means of supplementary statements and not on the Statement of Earnings.

THE NATIONAL BANK OF THE CITY OF NEW YORK

STATEMENT OF EARNINGS FOR MONTH OF ....

RECEIPTS:			
Interest			....
Discount			....
Commissions			....
Exchange (domestic)			....
Foreign Exchange			....
Total Receipts			....
Less: Interest Paid on Deposits			....
Gross Earnings			....
EXPENSES		....	
TAXES		....	....
Net Earnings			....
Losses Charged Off			....
Add Recoveries on Old Losses			....
Dividends Paid			....
Remainder of Net Earnings for Period			....

Illustration No. 142, Statement of Earnings of a Bank

Statement of Income and Expense of a Professional Association

The statement in Illustration No. 143 is taken from the 1925 Year Book of the American Institute of Accountants.

Statement of Income and Expense for a Professional Firm

A professional firm receives its income from the services which it renders, and its principal expenses are incurred for the maintenance of its office and the payment of its staff. The skeleton statement in Illustration No. 144, which was prepared for a firm of public accountants, will serve to illustrate the form of a Statement of Income and Expense for a professional firm.

The earnings of the firm are classified to indicate the sources from which income is received. The item "Retainers" is the proportionate part of the yearly fees received from clients who pay the firm a certain amount for their service throughout the year. The other classes of earnings are self-explanatory.

In connection with the expenses, there are two items which need to be explained. "Unallocated Road Expense" represents traveling expenses incurred by members of the staff which can not be charged to any client. It is customary to charge the

AMERICAN INSTITUTE OF ACCOUNTANTS AND AFFILIATED ACTIVITIES

CONSOLIDATED STATEMENT OF INCOME AND EXPENSES FOR THE YEAR ENDED AUGUST 31, 1925

INCOME:		
Dues	$43,062.69	
Subscriptions—*Journal of Accountancy*	37,576.49	
Subscriptions—bureau of public affairs	22,775.50	
Advertising	12,039.31	
Sales:		
The Journal of Accountancy and *Bulletin*	5,894.58	
Year-books, examination questions, etc.	2,852.32	
Bound volumes, indexes, and binding	2,508.28	
Contributions from state boards for examination of candidates	6,896.00	
Examination fees	5,795.00	
Income from investments	14,014.46	
Profit on sales of investments	777.75	
Interest on bank balances	284.30	
Circulating-library fees	273.17	
Miscellaneous	495.71	
Total income		$155,245.56
EXPENSES:		
Salary of secretary and editor	$12,000.00	
Other salaries	43,052.18	
Insurance and taxes	3,022.95	
Heat, light, janitor and elevator service	3,086.96	
Stationery and printing	15,974.06	
Postage, telegrams, express, etc.	10,259.59	
Legal expenses	8,036.50	
Traveling expenses	1,403.82	
Examination expenses, etc.	8,052.38	
Printing, binding, paper, etc., *The Journal of Accountancy*	21,113.47	
Binding—cost of sales	1,301.45	
Discounts allowed	633.74	
Securing subscriptions	2,866.83	
Students' department	720.00	
Chamber of Commerce, U. S. A.	225.00	
Committee on federal legislation	193.32	
Executive committee	509.41	
Year-books, examination questions, etc.	1,909.21	
Magazines	146.97	
Press clippings, supplies, etc.	564.13	
Depreciation on furniture and fixtures	2,474.65	
Depreciation on real estate	2,244.74	
Interest on mortgage bonds	5,629.17	
General expenses	2,933.76	
Total expenses		148,354.29
Excess of income over expenses for year		$ 6,891.27

Illustration No. 143, Statement of Income and Expense of a Professional Association

traveling expenses incurred in connection with an engagement to the client for whom the work is being done, but certain expenses may be incurred which can not be so charged and these must be borne by the firm. "Membership Fees" represent the dues of the firm or of members of the firm for membership in professional associations. These fees are charged as an expense of the firm on the theory that the firm benefits from such membership.

JONES & BAKER

STATEMENT OF INCOME AND EXPENSE FOR MONTH OF JANUARY, 19....

EARNINGS:		
Retainers		
Audits		
Installations		
Tax Work		
Consultation		
Total Earnings		
EXPENSES:		
Salary of Staff		
Rent		
Office Salaries		
Stationery and Supplies		
Telephone and Telegraph		
Unallocated Road Expense		
Membership Fees		
Miscellaneous		
Total Expenses		
Net Earnings		

Illustration No. 144, Statement of Income and Expense for a Professional Firm

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Public utilities protest against the recording of depreciation on their books, arguing that current charges for repairs and renewals, which counteract the wear and tear resulting from the use of the property, make the additional charge for depreciation unnecessary. The amount of bonds that can be issued, and usually the rates charged the public, are based on the value of the property investment; hence the utilities object to reducing the book value of their property by the recording of depreciation. Do you think depreciation should be recorded on the books of public utilities? Why?

— 2 —

In a city of any considerable size, gas and electric companies render bills to customers for gas and electricity used up to certain dates, which vary according to the dates on which the meter readings of the various districts were taken. Consequently, gas and electricity used from the date of the meter readings to the end of the month do not appear as charges to accounts receivable or as credits to sales. What effect has this on the Balance Sheet of the public utility? on its Statement of Profit and Loss? How might this condition be remedied?

— 3 —

Customers of the City Light and Power Co. are required to deposit $2.00 at the time the meters are connected, to cover possible loss to the company resulting from the non-payment of bills. This is not returnable except in the case of customers who have their meters disconnected, and must be paid again when the meters are reconnected for use. Would you consider it necessary to provide a reserve for bad debts of consumers? Explain.

— 4 —

On the Balance Sheet of the City Light and Power Co., the item "Accounts Receivable—Merchandise" shows the amount due from customers who have purchased electrical equipment on the deferred payment plan. (a) Do you think it is correctly included among the current assets? Explain. (b) Would you expect to find the reserve for bad debts for this class of accounts high or low? Why?

— 5 —

A street-car operated by the City Traction Co. collides with an automobile driven by C. A. Streeter, who is injured. A suit against the traction company results in a judgment for Streeter of $1,500.00, and the case is not appealed. What entries on the traction company's books would record (a) the judgment; (b) the payment of the judgment?

— 6 —

Considering the Balance Sheet of the City Light and Power Co. on pages 906 and 907, what is the approximate ratio of current assets to current liabilities? Compare this ratio with that commonly shown by the Balance Sheet of the average merchant or manufacturer.

— 7 —

Explain and illustrate the difference between a Balance Sheet and a Statement of Affairs.

— 8 —

Explain how a Statement of Affairs and a Deficiency Statement are prepared. Explain the purpose of each.

— 9 —

The Balance Sheet of the Hyman Corporation as of December 31, 1927, shows the following items:

Furniture and Fixtures..............	$ 2,500.00
Land............................	10,000.00

Ten days later the company finds that it is unable to meet its liabilities and a receiver is appointed. Under his direction a Statement of Affairs is prepared which contains these items:

Furniture and Fixtures..............	$ 1,500.00
Land............................	12,000.00

Explain the reason for the different value placed on each of these items on the two statements.

— 10 —

The Hyman Corporation owes $10,000.00 of notes to the First National Bank. It has pledged $15,000.00 of bonds as collateral for these bank loans. How will these facts be shown on the Statement of Affairs of the company?

— 11 —

The company owes employes $1,000.00. How will this be shown on its Statement of Affairs?

— 12 —

Under what conditions may it be to the advantage of the creditors to continue the operation of an insolvent business, at least temporarily?

— 13 —

Explain the principal items which appear on the Statement of Earnings of a bank.

— 14 —

Explain and illustrate the principal points of difference between the Statement of Earnings of a bank and the Statement of Profit and Loss of an industrial firm.

— 15 —

Explain and illustrate the principal points of difference between the Statement of Income and Expense of a professional firm and the Statement of Profit and Loss of an industrial firm.

— 16 —

A bank receives interest on money loaned to a customer. It pays interest on the deposits of another customer. Explain how these two transactions will be shown on the Statement of Earnings of the bank and on the Statements of Profit and Loss of the two customers.

LABORATORY MATERIAL

Exercise No. 223

Samuel Lyon, retail merchant, is unable to meet his obligations and makes an assignment for the benefit of his creditors on June 30, 19... His ledger shows the following balances:

Merchandise	$ 8,000.00
Real Estate and Improvements	5,000.00
Accounts Receivable	2,800.00
Furniture and Fixtures	560.00
Loan from Harry Smith	15,000.00
Bank Overdraft	1,200.00
Notes Payable	3,500.00
Accounts Payable	4,000.00

Investigation of his supplementary records shows that he has $5,000.00 of merchandise in addition to the $8,000.00 shown on his ledger. Of this, title is held to $1,200.00 by the bank as security for overdraft and $3,800.00 is held by Harry Smith as part security for his loan. Smith also holds a mortgage for full value of the real estate and improvements. Of the accounts receivable, $400.00 are considered bad, and $300.00 are expected to realize 50% of their face value. The merchandise inventory is expected to realize 90% of its book value, and furniture and fixtures are expected to realize 50% of the value at which they are shown on the records.

INSTRUCTIONS: Prepare a Statement of Affairs for Lyon as of June 30, 19...., showing the unsecured creditors the percentage of their claims which they may expect to realize.

Exercise No. 224

The Holmes Construction Company is unable to meet its obligations and is forced into the hands of a receiver. At the time the receiver takes charge, the Trial Balance shown on page 921 is prepared from the company's books.

The customers for whom the uncompleted contracts are being executed agree to take over the work in process on these contracts for one-half of its book value and release the company from all obligations. They further agree to purchase the materials on hand for $2,200.00. $5,000.00 of the securities is pledged to secure $11,000.00 due creditors, and $10,000.00 is pledged to secure $9,000.00 due creditors. The company owes for taxes on real estate, $150.00, and for salaries and wages of employes, $1,400.00. Neither of these amounts appear on the books. The company has discounted notes of customers at a local bank for

THE HOLMES CONSTRUCTION CO.

TRIAL BALANCE, JUNE 21, 192..

Cash	600	
Buildings	3,900	
Land	6,000	
Mortgage on Land and Building		7,000
Plant and Equipment	20,000	
Creditors		60,400
Completed Contracts Account (Losses)	18,000	
Uncompleted Contracts Account (Inventory of Work in Process)	30,000	
Securities	15,000	
Accounts Receivable	5,000	
General Expenses	6,500	
Inventory of Materials	2,500	
Profit and Loss	9,900	
Capital		50,000
	117,400	117,400

the amount of $2,000.00; $500.00 of these have been dishonored and the bank has informed the company that it will be held liable. It is estimated that the amount realized on land and buildings will be sufficient to satisfy the mortgage only, and that plant and equipment will realize 60% of its book value. $2,000.00 of the accounts receivable are estimated to be uncollectible.

INSTRUCTIONS: Prepare a Statement of Affairs and a relative Deficiency Statement for the Holmes Construction Company.

Exercise No. 225

Brown and Smith of London, England, who have been in business separately, decide to enter into partnership on June 30, 19... The Balance Sheets of Brown and Smith on that date are as follows:

BROWN

Accounts Payable	2,000	Furniture	750
Capital Account	6,000	Accounts Receivable	3,500
		Merchandise	3,550
		Cash	200
	8,000		8,000

SMITH

Accounts Payable	2,500	Furniture	600
Capital Account	4,000	Accounts Receivable	2,500
		Merchandise	3,000
		Cash	400
	6,500		6,500

The partnership agreement contains the following provisions:

1. The partnership is to take over the accounts receivable of Brown at $300.00 less, and the accounts receivable of Smith at $200.00 less than their face value. The accounts receivable are to be entered on the books at the value at which they appear on the Balance Sheets of Brown and Smith. The deductions of $300.00 and $200.00 are to be charged to the respective partners' accounts and credited to a Reserve for Bad Debts.

2. Only $300.00 of the furniture of Brown is to be acquired by the partnership.

3. Smith is to invest sufficient cash to make his investment equal the investment of Brown.

INSTRUCTIONS: 1. Draft the journal entries necessary:

a. To show on the records of Brown the transfer of his business to the partnership.
b. To show on the books of Smith the transfer of his business to the partnership.
c. To show on the records of the partnership the acquisition of the business of Brown and the business of Smith

2. Prepare a Balance Sheet of the partnership showing its financial condition at the time of organization.

Exercise No. 226

Prepare in skeleton form a Statement of Earnings for a bank and write a brief report explaining wherein this statement differs from the Statement of Profit and Loss for an industrial firm.

CHAPTER LXI

ACCOUNTING FOR SALES

Need for Accurate Record of Sales

Sales are made on various terms, and the title to the goods sold passes from the vendor to the purchaser according to the terms of sale. It is necessary that careful attention be given to the recording of each type of sale if its effect on the financial condition of the seller be clearly shown. It is the purpose of this chapter to discuss the method of recording the different kinds of sales which may arise in the typical mercantile or manufacturing company.

Different Kinds of Sales

From the point of view of this discussion, sales may be classified as follows:

(1) Cash sales
(2) Sales on account
(3) C. O. D. sales
(4) Instalment sales
(5) Sales on approval
(6) Sales for future delivery
(7) Branch sales
(8) Consignment sales

There may be some question whether (7) and (8) should be treated in a discussion of sales, since a transfer of goods to a branch or consignee does not constitute a sale. It is appropriate, however, to consider the methods of making sales through branches and consignees in discussing the general problem of accounting for sales. It is not probable that any one firm makes at any one time all the types of sales listed above, but all of these are regularly made by different firms.

The first seven classifications of sales given above are discussed in this chapter; the eighth classification, consignment sales, is discussed in Chapter LXII.

Cash Sales

In a retail business, cash sales are usually entered daily in the cash records as a total. The total is obtained by adding the duplicate cash sales slips for the day. To make the monthly posting easier, a "Cash Sales" column may be introduced in the cash book, and the total of this column posted to Sales at the end of the month. When this method is followed, no entry is made in the sales record for cash sales. The total sales for the month are shown in the Sales account in two amounts, the credit sales being posted from the sales record, and the cash sales from the cash record.

This method is possible only when it is not desired to classify the sales. If a classification of sales is made by commodities, departments, or any other basis, it is necessary to have a classification of cash sales as well as of sales on account. It is usually not feasible to have as many cash sales columns in the cash record as there are classes of sales; consequently, the cash sales are recorded in the sales record for purposes of analysis. In this case, there is but one "Cash Sales" column in the cash record. The total of this column is posted to the credit of Cash Sales. In the sales record there is one column for cash sales, which shows the total cash sales. The individual cash sales are distributed in the analysis columns, and are included in the totals of these columns which are posted to the credit of the respective sales accounts. The total of the "Cash Sales" column is posted to the debit of Cash Sales and should balance the credit to this account, which is posted from the cash record.

In a wholesale or manufacturing business, usually no distinction is made between the recording of cash sales and sales on account. In each case, the sales invoice is entered in the sales record. This results in a debit to Accounts Receivable and a credit to Sales. The cash received in payment is entered in the cash record. This results in a debit to Cash and a credit to Accounts Receivable, which offsets the debit made to the last account from the sales record. Since cash sales are usually not frequent in a wholesale or manufacturing business, this method is both desirable and feasible. In such a business, the one who makes the record of the invoice does not, as a rule, make the record for the cash, and it is more convenient to treat the sale and the payment as distinct and separate transactions.

Sales on Account

Sales on account are those based on an unconditional contract which provides for payment in a relatively short time after the consummation of the sale. In the retail trade, payment for sales on account is usually made on the first day of the month

following the one in which the sale is made. For example, sales may be made by a grocery store to a customer each day in the month; payment is due for the total on the first day of the following month.

In most cases except the retail trade, it is customary to state the terms of sale on the invoice. In many cases, an option is provided by offering a discount for prompt payment, with the full amount due at a later date. For example, the terms may be 1/10, n/30, or 2/10, n/60. The rate of discount, as well as the length of time before the net amount is due, varies in different types of business, and even on different lines of goods in the same business. In some lines, no discount is offered, all terms being for net payment.

There are no significant problems involved in recording sales on account except the method of recording the sales discount. Some contend that the discount should be subtracted from the sales price at the time of sale, and only the net amount recorded. Under these circumstances, discount would enter into the accounts only in the case of customers who fail to take the proffered discount. It would then be shown as an income. Under the more customary plan, Accounts Receivable is debited and Sales credited for the gross amount of the invoice at the time the sale is made. If a discount is taken, entry for it is made at the time of payment by debiting Sales Discount and crediting Accounts Receivable for its amount.

C. O. D. Sales

When a sale is made with the agreement that the purchaser is to pay for the merchandise when it is delivered, the terms are said to be cash on delivery or as it is more frequently stated, C. O. D. Such sales are made in the wholesale trade when orders are received from customers to whom it is not desired to extend credit. They are made in the retail trade when a customer does not have a charge account and has not sufficient funds to make payment at time of purchase. The procedure for handling C. O. D. sales is different in a wholesale and a retail business. It is necessary, therefore, to discuss separately wholesale C. O. D. sales and retail C. O. D. sales.

When C. O. D. sales are made at wholesale, the customer usually lives in a different city from the seller, and the goods are delivered to him by freight, express, or parcel post. It is necessary to notice the procedure in each case.

When a C. O. D. shipment is made by freight, an order bill of lading is used. A sight draft is drawn on the purchaser and attached to the bill of lading. Usually the bill of lading with the attached sight draft is deposited with the local bank of the seller, and the bank transmits it to another bank in the city where the

purchaser lives. The latter bank on receipt of the bill of lading with attached draft notifies the purchaser, who, by paying the draft, can obtain the bill of lading. This entitles him to obtain the merchandise from the transportation company. The bank to whom the purchaser pays the draft transmits the proceeds to the original bank. It credits the seller with the proceeds.

When a C. O. D. shipment is made by express, the express company will not deliver it until the purchaser pays the transportation charges and the value of the shipment. An invoice is made for the amount of the shipment and inclosed in a special envelope provided by the express company. The envelope accompanies the package. When it reaches its destination, the express company notifies the purchaser to call and receive it, or delivers it to the purchaser. In either case, the purchaser is required to pay the amount of the invoice plus the express charges before the package is delivered to him. The express company remits the amount of the invoice to the seller by its express money order, deducting a charge for issuing the money order, unless this charge has been collected from the purchaser. If the seller desires the purchaser to pay the charges for issuing the money order to be sent him in payment of the shipment, he must indicate this on the C. O. D. envelope.

When a C. O. D. shipment is made by parcel post, a special ticket provided by the Post Office Department is attached to the package; this shows the amount to be collected before delivery is made. When delivery is made, the postmaster at the point of delivery mails the consignee a post-office money order for the amount shown on the ticket.

There must be some method of accounting for C. O. D. sales during the period intervening between the shipment of the goods and the receipt of the returns. The usual method is to debit such sales to Accounts Receivable and credit the Sales account in the same manner as other sales. In the customers' ledger, instead of opening a separate account with each customer, all such sales are debited to a C. O. D. account, the name of the customer being written in the explanation column. When the returns from the sale are received, a credit is made to the C. O. D. account, the entry being made on the same line as the corresponding debit. The debit items which are not offset by a credit item give the balance of the account at any time. Sometimes an account is opened in the subsidiary ledger with the transportation company instead of opening the C. O. D. account. It is used in the same manner as the C. O. D. account.

To illustrate: It may be assumed that R. H. Jones, a wholesale merchant, has made the following C. O. D. shipments: December 23, Harvey King, $400.00: December 26, James Long, $200.00; December 28, L. W. Smith, $371.75.

On December 30 he receives $200.00 in payment of the shipment to Long. At the end of the month of December his C. O. D. account will appear as follows:

C. O. D.

192						192					
Dec.	23	Harvey King		400		Dec.	30	James Long		200	
	26	James Long		200							
	28	L. W. Smith		371	75						

In a retail business, C. O. D. sales are delivered to the purchaser and the sales price collected by the delivery men of the store. Some stores have found by experience that a considerable number of C. O. D. deliveries are refused by the purchaser, and are returned to the store. In such cases it is preferable not to make any record of C. O. D. sales until delivery is completed, and the collection for the sale made. The C. O. D. sales tickets are filed but are not entered until collection has been made. The merchandise is turned over to the delivery department, where a memorandum record is made, charging the individual drivers for the C. O. D. packages given to them. At the end of the day, the driver must return either cash or goods for the amount of the merchandise charged to him. The amount of the cash received is reported to the accounting department, and an entry can be made the same as if the sales had been originally made for cash.

If the C. O. D. sales returned are not numerous, an entry may be made each day, debiting the Accounts Receivable account and crediting Sales on the main ledger, and debiting a C. O. D. account in the subsidiary ledger. The cash received each day from C. O. D. deliveries will be debited to Cash and credited to Accounts Receivable and the C. O. D. accounts. The balance of the C. O. D. account at any time will show the amount of the merchandise sold C. O. D. which is in the hands of the delivery department. This amount can be verified by comparing it with the amounts charged to the drivers on the records of the delivery department.

If the latter method of recording C. O. D. sales is followed, it will be necessary to make adjusting entries for C. O. D. deliveries which are refused. Such returns may be debited to Sales Returns, but it is preferable to debit them to the Sales account, since they are different from the usual returned sale. In any case, the Accounts Receivable and C. O. D. accounts must be credited for the goods returned.

It would seem more nearly correct, from a theoretical point of view, to have the C. O. D. account on the main ledger and not

to affect the Accounts Receivable account with C. O. D. sales. This seems proper because the claims against customers for C. O. D. sales are not the same as those arising from sales on account. If C. O. D. sales, however, are to be recorded in the general sales record, it is more convenient to have the C. O. D. account a subsidiary account so that the total of the sales in the sales record can be posted to Accounts Receivable. Otherwise, it is necessary to exclude the C. O. D. sales from the total in some manner. This may be done by having a separate column for C. O. D. sales. In this case the total of the sales on account column will be posted to Accounts Receivable, the individual items in the C. O. D. column will be posted to the C. O. D. account, and the total of both columns credited to Sales. In this case it is unnecessary to open an account with C. O. D. in the accounts receivable ledger.

Instalment Sales

Instalment sales are those for which the payments are deferred and made in instalments. Sales on the instalment plan are made of real estate, furniture, books, correspondence study courses, and many other commodities and services. By the use of this plan, sales can be made to a class of people who would probably never accumulate sufficient money to pay the entire cost of the article at one time. Such sales are made under varying conditions. In most cases, the vendor secures the notes of the vendee, payable on the instalment dates. In many cases, the vendor retains title to the property until the instalments are paid.

If a business makes other than instalment sales, the claims against customers arising from the instalment sales should be recorded separately from the accounts receivable or notes receivable arising from the other sales. There are two reasons why this separation should be made:

First, receivables arising from sales made on customary terms are classed as a current asset, but claims against customers arising from instalment sales can not be so classed, for they may not be payable for many months. Usually there are some payments which are to be made at the end of each month; consequently, a part of the total claims outstanding may be considered as a current asset, but in the case of long-time contracts, the major part of these claims must not be so shown. Since they do not have the characteristics of a fixed asset, it is desirable that they be shown under a separate heading on the Balance Sheet.

Secondly, it is always impossible to collect the total instalments due from all customers. Even though careful scrutiny be exercised over the credit extended, there will always be customers

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

EMPLOYED BY	Feltman & Curme	NAME	Harry Fallon
ADDRESS	435 Vine St., City	ADDRESS	2439 Moerlein Ave., City
POSITION	Assistant manager	RE-MOVED TO	
HOW LONG	3 years		
REFERENCES	Washington Bank The Denton Company		

CHARGES

DATE 1926		MEMO	FOL	✓	AMOUNT		TERMS	DATE 19__		MEMO	FOL	✓	AMOUNT		TERMS
Aug.	25	#2361	289		361	25	$15.00 WEEKLY SEMI MONTHLY MONTHLY								$ WEEKLY SEMI MONTHLY MONTHLY
1927 June	2	#4009	1161		58	25	5.00 mo. on 15th								
					419	50									

PAYMENTS

DATE 1926		FOLIO	AMOUNT PAID		BALANCE DUE		DATE 1927		FOLIO	AMOUNT PAID		BALANCE DUE		DATE 1927		FOLIO	AMOUNT PAID		BALANCE DUE		DATE 19__		FOLIO	AMOUNT PAID		BALANCE DUE	
Aug.	25	895	15	–	346	25	Brot. Fwd.			210	–	151	25	Brot. Fwd.			391	25	28	25							
Sept.	15	904	15	–	331	25	Apr.	30	1021	15	–	136	25	Dec.	15	1034	5	–	23	25							
	30	913	15	–	316	25	May	14	1029	15	–	121	25	1928 Jan.	14	1045	5	–	18	25							
Oct.	15	924	15	–	301	25		31	1038	15	–	106	25	Feb.	15	1055	5	–	13	25							
	30	932	15	–	286	25	June	15	1046	20	–	144	50	Mar.	15	1066	5	–	8	25							
Nov.	15	942	15	–	271	25		30	1056	15	–	129	50	Apr.	16	1076	5	–	3	25							
	30	951	15	–	256	25	July	15	1067	20	–	109	50	May	15	1087	3	25									
Dec.	15	959	15	–	241	25		30	1075	15	–	94	50				419	50									
	31	966	15	–	226	25	Aug.	15	1082	20	–	74	50														
1927 Jan.	15	975	15	–	211	25		31	1092	15	–	59	50														
	31	984	15	–	196	25	Sept.	15	1101	20		39	50														
Feb.	15	996	15	–	181	25		30	1112	1	25	38	25														
	28	1004	15	–	166	25	Oct.	15	1120	5	–	33	25														
Mar.	15	1010	15	–	151	25	Nov.	15	1127	5	–	28	25														
Car. Fwd.			210	–	151	25	Car. Fwd.			391	25	28	25														

Illustration No. 145, Instalment Customer's Account

who will default in payment. As a consequence, there will be a considerable loss from bad debts, unless the manufacturer or retailer protects himself by retaining title to the property sold; and even in this case, there will be considerable expense in securing possession of the property and in reselling it. In many cases the expense will be prohibitive, and it will be regarded as better to lose the balance if it be small in amount. It is necessary, therefore, in valuing the amount due on instalments, to make a liberal allowance for losses arising from bad debts and the expense incurred in making collection. By having the instalment sales recorded separately, it is easier to determine what the total provision for bad debts should be.

Another problem which may arise in connection with instalment sales is the allocation of the profits as between the periods when the sales take place and the collection therefor is made.

For income tax purposes, if the initial payment is less than twenty-five per cent, the vendor may distribute the profits in proportion to the collections made during each taxable period. From the point of view of sound accounting, the profits should be deferred in all cases, regardless of the amount of the initial payment.

If a business makes extensive instalment sales as well as sales on regular terms, separate records should be maintained for the instalment transactions. Because of the frequent payments on account, it is often expedient to have a different form of record for accounts of customers to whom sales have been made on instalment, as shown in Illustration No. 145.

Sales on Approval

Merchandise may be delivered to customers "on approval" with permission to return it within a specified time. Such sales are made frequently by publishing companies and retail stores. The method of recording such sales depends on the terms of the sale.

When books are sent on approval by a publishing company, it is usually with the agreement that the book is to be returned or payment made within a specified time. Under such conditions, it is better not to record the sale until payment is made. A copy of the sales invoice can be filed under the date when the book should be returned or the payment made. If payment is made, the invoice is removed from the file and the sale recorded. If the book is returned, the invoice is removed from the file but no entry need be made in the records. The sales invoice may be filed for future reference so that if a customer abuses the privilege of securing books on approval, this can be detected from the file.

When wearing apparel is delivered to a customer on approval by a retail store, it is usually to a customer who has a charge account, and if the merchandise is retained, it is charged to his account. If the customer takes but one article with the permission to return it under certain conditions, it is customary to charge his account at once, and if the article is returned, a credit is made to his account. The reason for this procedure is twofold: (1) if only one article is taken, in the majority of cases it is retained, and consequently it is not difficult to make the necessary credits arising from those which are returned; (2) in most cases if the customer decides to retain the article he makes no report and consequently no checking up is necessary if it is charged to his account at the beginning. If the customer takes two or more articles of merchandise with the intention of choosing the one he desires, no entry in the financial records can be made until the choice is made and the other articles returned. In the meantime,

a statement of the merchandise in his possession will be kept in a tickler file. As suggested in the case of a publishing company, it is often wise for the retail store to keep a record of the customers who return merchandise which has been purchased on approval, so that those who abuse the privilege may be detected.

Sales for Future Delivery

In some lines of business, orders for merchandise are received several months in advance of the date specified for delivery. There has been much discussion by accountants and business men concerning when such orders may be recorded as sales. Legally, they may be so recorded whenever an enforceable claim arises against the purchaser. This time is dependent on the conditions under which the order is placed. Experience shows that such orders are likely to be canceled at any time before the goods are shipped to the customer, and, regardless of the legal rights of the seller, it is usually not expedient to attempt to enforce the claim against the customer arising under a canceled order. In most cases, it is better not to enter orders for future delivery as sales until the goods are shipped to the customers.

There are, of course, special cases where entry can be made before the goods are shipped. One illustration of such cases is found in the printing business, where it is customary for the customer to leave his product in the warerooms of the vendor long after he has been invoiced for it. In this case, entry for the sale will be made when the customer is invoiced, regardless of the time of delivery.

Branch Sales

Merchandise may be transferred from the parent company to the branches on various terms and under various conditions. From the point of view of accounting, it is preferable that it be transferred at cost, but there may be administrative reasons why this is not possible. Consequently it may be transferred at selling price or at an arbitrary price which is more than cost but less than selling price. In any case, such a transfer does not represent a sale in the usual meaning of this term, and should not be so recorded. It represents only a change in the location of the merchandise stock. The accounting procedure involved in the handling of goods shipped to branches will be explained in Chapter LXVIII on "Accounting for Branches".

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain and illustrate why the terms under which sales are made must be considered in making the accounting records.

— 2 —

In what way does the recording of sales on account in a retail business differ from the recording of sales on account in a wholesale or manufacturing business?

— 3 —

The New York Department Store makes 25% of its sales for cash. It is necessary that the cash sales be analyzed by departments to make possible the determination of departmental profits. Explain fully how the cash sales will be recorded so as to effect this analysis.

— 4 —

Two per cent of the total sales of the New York Wholesale Company are for cash. The sales of the company are analyzed on a departmental basis. Explain how the method of recording the cash sales of this company will differ from recording the cash sales of the New York Department Store.

— 5 —

Explain and illustrate the meaning of *instalment sales*.

— 6 —

Explain why instalment sales should be separated from sales made on customary terms.

— 7 —

The Universal Publishing Company sends its publications to its customers with the privilege of five days' examination, at the end of which time the books may be returned or payment made. Explain how this company will record its sales.

— 8 —

The Chicago Specialty Store deals in quality lines of women's wear. Customers frequently take several articles from the store for examination with permission to select one and return the remainder. Explain how this store will handle these transactions.

— 9 —

The sales manager of the Chicago Specialty Store suspects that some of its customers abuse the privilege of taking goods on approval by obtaining goods for a short length of time and then returning the entire amount without making a purchase. He desires some method by which to determine those customers who habitually follow this practice. Explain how this may be accomplished.

— 10 —

The X Wholesale Company receives orders for merchandise in April which are to be shipped in August to its customers. When should these orders be entered on the books as sales?

— 11 —

The Plimpton Press prints books in large quantities for publishing houses. The books are stored in the warehouse of the company and are requisitioned by the publishing companies when needed. At the end of each month the Plimpton Press invoices each company for all the books that have been shipped to it during the month. At the end of the year each company is invoiced for all the books remaining in the warerooms of the Plimpton Press. Explain when the Plimpton Press should enter these sales upon its books.

— 12 —

Explain and illustrate the method of handling C. O. D. sales in a retail and a wholesale business.

LABORATORY MATERIAL

Exercise No. 227

The Kingdon Manufacturing Company manufactures ten products. These products are sold through nine branches located so as to cover the entire United States. The company desires to obtain the following information each month: (a) total sales of each product by all branches; (b) total sales of each branch of all products; (c) sales of each product by each branch.

INSTRUCTIONS: Write a report to the general manager of the company which will explain the following:

a. The accounts which should be maintained to provide the information which the company desires. If you think part of this information can be obtained in some other way more conveniently than by means of the ledger accounts, explain the method you think desirable.

b. The monthly reports which should be used to present this information to the general manager.

Exercise No. 228

The following statement shows the sales for each branch of the Kingdon Manufacturing Company for the month of March, 19..., with appropriate comparisons:

MONTHLY REPORT OF SALES

Month of.................192...

Sales Unit	This Month	Estimated This Month	% Inc. or Dec.	Last Month	% Inc. or Dec.	To Date This Year	Estimated To Date This Year	% Inc. or Dec.	To Date This Year	% Inc. or Dec.
N. Y. City...	109,694.64	126,600.00	—13	89,990.54	22	276,028.76	316,500.00	—13	744,145.79	—63
Atlanta......	239,991.44	293,600.00	—14	227,725.39	5	659,035.33	734,000.00	—10	1,423,123.95	—54
El Paso......	93,488.52	80,000.00	17	70,771.76	32	240,983.53	200,000.00	20	351,546.69	—31
San Francisco.	56,200.31	84,000.00	—33	44,006.22	28	184,226.87	210,000.00	—12	502,727.55	—63
Duluth.......	58,290.63	80,000.00	27	62,056.93	— 6	175,863.09	200,000.00	12	439,058.03	—60
Chicago......	63,866.37	70,000.00	— 9	46,039.59	39	147,221.41	175,000.00	—16	376,551.76	—61
Boston.......	88,723.28	80,000.00	11	68,561.51	29	223,544.35	200,000.00	12	336,995.70	—34
Pittsburgh....	54,926.58	50,000.00	10	55,405.49	— 1	147,980.28	125,000.00	18	....	....
Sacramento...	162,778.05	142,000.00	15	169,330.00	— 4	541,555.71	335,000.00	53	....	...
....	....	....	....	....	....	....	....	....	....	...
....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....
Total.....	927,959.82	1,006,200.00	— 8	833,887.43	11	2,596,439.33	2,495,500.00	3	4,174,149.47	—38

INSTRUCTIONS: Write a brief report to the general manager of the company stating what this report indicates with reference to the sales of the company as a whole and what it indicates with reference to particular branches.

Exercise No. 229

The fiscal year of the X Manufacturing Company ends December 31. The bookkeeper presents a Statement of Profit and Loss to the directors in the following form:

Gross Sales..................	$570,000.00	
Increase of Inventory.........	30,000.00	$600,000.00
Cost of Sales:		
Operating expenses, material, and supplies.........	$514,000.00	
Plant Expense.............	24,000.00	
Freight on Returned Goods	1,200.00	
Purchases of Finished Goods	20,800.00	560,000.00
Net Manufacturing Profit		$ 40,000.00
Other Income:		
Miscellaneous Earnings.....	$ 3,000.00	
Profit on Contracts.........	13,000.00	
Discount on Purchases......	1,000.00	17,000.00
Gross Plant Profit........		$ 57,000.00
Less:		
Discount on Sales..........	$ 5,750.00	
Rebates and Allowances....	2,250.00	8,000.00
Net Plant Profit.........		$ 49,000.00
Less:		
General Expenses..........	$ 11,000.00	
Interest...................	3,000.00	14,000.00
Net Profit..............		$ 35,000.00

The directors are dissatisfied with this report and request you to prepare a Statement of Profit and Loss in proper form. On examination of the records you ascertain the following information:

Inventory, January 1: Materials, $230,000.00; Supplies, $70,000.00; Finished Goods, $90,000.00.

Inventory, December 31: Materials, $280,000.00; Supplies, $20,000.00; Finished Goods, $120,000.00.

Material used in factory during the year, $150,000.00; wages, $245,000.00; fuel, $5,000.00; repairs and renewals, $4,000.00.

Other operating expenses, including $50,000.00 of supplies used, $110,000.00.

INSTRUCTIONS: Prepare a Statement of Profit and Loss in proper form from the statement prepared by the bookkeeper and the supplementary data obtained from the records.

Exercise No. 230

The expense and income accounts of the Frazer Mercantile Company for the years 1926 and 1927 show the following:

1926

Merchandise Inventory, January 1, 1926	$150,000.00
Merchandise Purchases	633,000.00
Merchandise Sales, Account	750,000.00
Merchandise Sales, Cash	10,000.00
Commissions to Salesmen	30,000.00
Salaries of Salesmen	30,000.00
Salaries of Sales Clerks	15,000.00
Rental	5,000.00
Stationery and Postage	5,000.00
General Expense (Administrative)	22,000.00
Interest	4,000.00
Inventory, December 31, 1926	125,000.00

1927

Merchandise Inventory, January 1, 1927	125,000.00
Merchandise Purchases	600,000.00
Merchandise Sales, Account	750,000.00
Merchandise Sales, Cash	10,000.00
Commissions to Salesmen	30,000.00
Salaries to Salesmen	10,000.00
Salaries to Sales Clerks	10,000.00
Rental	5,000.00
Stationery and Postage	3,000.00
General Expense (Administrative)	15,000.00
Interest	1,000.00
Inventory, December 31, 1927	125,000.00

INSTRUCTIONS: 1. Prepare a Statement of Profit and Loss for each year.

2. Write a brief report explaining the reason for the difference in results for the two years.

CHAPTER LXII

CONSIGNMENT SALES

Meaning of Consignment Sales

When a merchant ships goods to another party to be sold by him for the account of the shipper, the transaction is called a *consignment.* More technically, a consignment may be described as goods delivered by the party of the first part to the party of the second part for sale by the party of the second part for the account of the party of the first part.

It will be seen from this definition that two parties are involved in a consignment. The party who ships or consigns the goods is known as the *consignor*, and the party who receives the goods for sale is known as the *consignee.*

Goods sent on consignment are termed *consignments-out* by the consignor, and are termed *consignments-in* by the consignee when received by him. Sometimes consignments-out are called *shipments.*

Relation of Consignor and Consignee

In their dealings with each other, the consignor and consignee have the relation of principal and agent, and their actions are governed by the general rules of the law of agency. Each must comply with the contract which exists between them; in the absence of a specific contract, they are governed by the trade customs of the business in which they are engaged. The consignee, as agent of the consignor, must comply with the instructions of the latter so long as they are not inconsistent with the terms of their contract or the customs of the trade.

With reference to the goods, the relation between the consignor and the consignee is that of bailor and bailee, and is governed by the general rules of the law of bailments. Barring specific instructions or specific contract agreements, the consignee may conduct the consignment transactions for his principal on the same basis and in the same way as he would conduct them if the goods were his own. He is expected to exercise the same care in handling the goods as if they were his own. He must exercise ordinary diligence in protecting and safeguarding them.

He is not liable, however, for damage from unavoidable causes, such as cyclones, destruction by unavoidable fire, and similar causes. What constitutes due diligence on the part of the consignee depends on the nature of the goods and the circumstances of the particular case. In general, the consignee is required to exercise the same degree of diligence in safeguarding the goods of his principal as an ordinary, reasonable man would use in safeguarding his own goods.

The agent must keep the goods of his principal separate from his own goods and also the goods received from other consignors. If he mixes the goods of his principal with his own, he does so at his peril. For example, under such circumstances, in case of partial loss the agent may be compelled to bear the entire loss on the assumption that the goods destroyed are his and not those of his principal, since he is unable to designate the latter.

Consignee's Lien on Consigned Goods

The consignee usually pays certain expenses in connection with the goods he receives from the consignor. These include such items as freight, insurance, duty, handling charges, etc. The consignee in some cases makes advances or payments to the consignor prior to the sale of the goods. For all legitimate expenses incurred by the consignee, and for all advances made to the principal, he has a lien on the consigned goods. The consignor can not reclaim the consigned goods until he has satisfied the claims which the consignee has against them.

The consignee usually receives a commission in payment for his services in selling the goods. When the goods are sold, he has the right to deduct from the proceeds all expenses incurred in connection with them and his commission, before remitting to the consignor. If the goods do not sell for sufficient to pay the expense incurred in connection with them, the consignee has a claim against the consignor for the difference. It may be well to mention that the commission of the consignee is calculated on the gross sales and not on the net proceeds of the sales.

Advantages of Consignments

The practice of selling goods by means of consignments is not so prevalent at present as it was formerly, but it still prevails in some lines of business. Most of the live stock shipped to the stockyards in the large cities is shipped on consignment. A considerable portion of the produce shipped to the city markets is sold in the same manner.

In many lines of business, the consignment method of sale offers advantages to one or both parties. The consignor retains title to the goods until they are sold, and this may be an advantage to the consignor in case the credit rating of the consignee is doubtful. At the present time, when credit information is readily available, this is not so important as formerly. In the case of perishable goods, it is an advantage to the consignee to receive them on consignment, since it enables him to shift all damages in connection with the goods to the consignor. In some lines of goods, like cigars, new brands are received on consignment while their merit is being determined. This enables the dealer to shift to the producer the risk incurred in introducing a new brand. As a consequence, it makes it necessary for the producer not only to produce an article of merit, but also to advertise it sufficiently to create a demand for it.

The Account Sales

After the consignee has sold the goods received from his principal, it is necessary that he render an accounting for the sale. This accounting is usually rendered by means of a report known as an "account sales". The typical form of an account sales is shown in Illustration No. 146.

ACCOUNT SALES

Dayton, Aug. 5, 192

Mr. W. E. Scott Address Springfield

Below please find account sales of 200 bbls. Potatoes

Sold by THOMPSON & STRONG, *Commission Merchants*

Received July 25 192___ *and sold for account of* yourselves

DATE		CHARGES	FOLIO	AMOUNT		DATE		SALES	FOLIO	AMOUNT	
July	25	Freight	C5	78	40	July	25	18 bbls. @ 4.00	S7	72	—
Aug.	5	Drayage	J9	10	—		26	30 " @ 3.75	S8	112	50
		Returns					26	10 " @ 4.00	C4	40	—
		"					28	40 " @ 3.75	S8	150	—
		Advances					29	60 " @ 3.75	S9	225	—
		"					30	35 " @ 3.75	S7	131	25
	5	Storage	J9	6	—	Aug.	2	6 " @ 3.25	C6	19	50
		Insurance									
	5	Commission	J9	75	03			1 bbl. exhibited			
								at county fair			
	5	Net Proceeds	C7	580	82			Aug. 1-4 on hand			
				750	25					750	25

Illustration No. 146, Account Sales

It will be seen that the account sales is similar in form to an invoice, and contains a summarized statement of all transactions pertaining to a particular consignment. It shows the quantity of the goods received, the sales made, the expenses incurred, and the balance or net proceeds. The disposition of the proceeds may also be indicated, whether remittance is being made or the amount placed to the credit to the consignor.

Accounting for Consignments

Different methods are used in the recording of consignments, but the differences are in the main a matter of form, the final result being the same. In the following discussion only one method of recording consignments is discussed and illustrated. It is thought that this is sufficient for the purpose of the present discussion. At the end of the chapter, references are given where more complete discussions may be obtained.

The Consignor's Record

The chief interest of the consignor is to ascertain the net proceeds of the consignment. At the time the goods are shipped, there is no change in his financial condition unless expenses are incurred in making the shipment. The consignor still retains title to the goods, and by the shipment he merely changes their location. Consequently, he makes no record of the shipment in his financial records. A copy of the invoice sent to the consignee will be filed as a memorandum of the transaction. In some cases, an invoice of a different color is used for consignment shipments to eliminate the possibility of confusion with the regular sales invoice.

If any expenses in the way of packing, drayage, or insurance incurred in making the consignment shipment can be allocated directly to it, an account will be opened which may be termed "Consignment Out (name of consignee) No.—." This account will be debited with the expenses incurred at the time the consignment is made. When the consignee renders an account sales, the consignment account will be credited and Cash debited if the consignee remits the proceeds. If the consignee does not remit in cash, Accounts Receivable, instead of Cash, will be debited for the net proceeds. In any case, the balance of the consignment account will show the net returns from the consignment shipment. This balance may be transferred to the Sales account or, if it is desired to keep the consignment sales separate, it may be transferred to a Consignment Sales account. At the end of the fiscal period, this account will be closed the same as the Sales account.

Illustration of the Consignor's Entries

To illustrate the entries made on the records of the consignor, the following simple consignment transaction is used:

J. O. Smith ships to R. L. White, to be sold on his account, two hundred units of N commodity. Smith pays $40.00 for drayage and $60.00 for insurance on the merchandise. White pays freight and drayage, $135.00. He sells the goods for $1,500.00, charges a five per cent commission and $60.00 for storage, and remits the net proceeds by New York draft. The following entries will be made on the records of the consignor:

1. At the time the merchandise is sent to the consignee:

	Consignment Out, R. L. White No.—..	100		
	Cash...........................			100
	Cartage $40.00, insurance $60.00, paid in cash.			

2. At the time the account sales is received from the consignee:

	Cash............................	1,230		
	Consignment Out, R. L. White No.—			1,230
	To record net proceeds of consignment as shown by account sales at this date.			
	Consignment Out, R. L. White, No. —	1,130		
	Sales...........................			1,130
	To transfer net returns from consignment to Sales account.			

For the sake of convenience, the foregoing entries are all shown in journal form. The reader can easily see the proper distribution of the entries as between the customary records of entry.

The Consignor's Inventory

If the consignor's fiscal period ends prior to the receipt of an account sales in full settlement, the goods on consignment as shown by the consignment invoice on file must be included in his inventory. He retains title to this merchandise until it is sold, and it constitutes a part of his inventory the same as the merchandise in his stockrooms. In arriving at the value of consigned goods, the expenses incurred in sending the goods to the new market may properly be included as a part of the cost.

The Consignee's Record

The consignee should keep a record which will enable him to discharge his liability to his principal when the goods are sold, and enable him to ascertain his earnings on the consignment transaction. When the consignment is received, the financial condition of the consignee is not affected thereby, so no entries in his general accounts need to be made. A memorandum record of the goods received is made, and frequently this is made on a looseleaf duplicate record in such a manner that the original copy when completed will serve as an account sales.

If, as is usual, the consignee incurs expenses in connection with the consignment, these will be debited to a consignment account. Usually the name of the consignor and the number of the account are a part of the account title. When the goods are sold, the commission of the consignee is debited to the consignment account and credited to an income account termed Commissions Earned. If storage charges are made, they should be debited to the consignment account and credited to a Storage Earned account. The receipts from sales are credited to the consignment account, and debited to Cash or Accounts Receivable, as the case may be. The balance of the consignment account now represents the liability of the consignee to the consignor. If the consignee remits in cash, the consignment account will be debited and Cash account credited. If the proceeds are to remain to the credit of the consignor, the consignment account will be debited and Accounts Payable credited.

The Commissions Earned and Storage Earned accounts will be closed into the Profit and Loss account at the end of the fiscal period.

Illustration of the Consignee's Entries

To illustrate the entries made on the records of the consignee, the simple example given on page 941 will be used. The entries on the records of the consignee will be as follows:

1. On the receipt of the consignment:

	Consignment in, J. O. Smith No.—...	135		
	Cash..........................			135
	Paid freight and drayage on consignment of J. O. Smith.			

2. When the consignment is sold:

	Cash..........................	1,500		
	Consignment in, J. O. Smith No.—..			1,500
	To record sale of the consignment of J. O. Smith.			

	Consignment in, J. O. Smith No.—	135	
	Commissions Earned		75
	Storage Earned		60
	Commission and storage charges on consignment of J. O. Smith.		
	Consignment in, J. O. Smith, No.—	1,230	
	Cash		1,230
	To record payment of proceeds of consignment No.— of J. O. Smith.		

The foregoing entries are made in journal form for the sake of convenience.

The Consignee's Inventory

At the end of the fiscal period, the consignee must be careful not to include in his inventory any goods he has received on consignment. He does not have title to these goods; consequently, they do not represent an asset to him. The expenses he has paid in connection with the consignment will be shown on his Balance Sheet, since they are an accounts receivable. They should, of course, be shown as a separate item and not be confused with customer's accounts.

REFERENCES FOR COLLATERAL READINGS:

Principles of Accounting, by John Raymond Wildman, C. P. A.—The William G. Hewitt Press, New York.

Accounting Theory and Practice, Vol. I, by Roy B. Kester, C. P. A.—The Ronald Press, New York.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain and illustrate the meaning of the terms *consignment, consignor*, and *consignee.*

— 2 —

What is the distinction between a consignment out and a consignment in?

— 3 —

James King & Co., of Chicago, ship merchandise to Henry Lee & Co., of New York, to be sold on consignment. Lee & Co. receive the goods, but instead of placing them in the warehouse where their own merchandise is kept, leave them where they are exposed to the weather. As a result the merchandise is damaged to a considerable extent. Can King & Co. recover damages from Lee & Co. for the injury to their merchandise? Why?

— 4 —

Assume that Lee & Co. receive the merchandise and place it in the warehouse with their own goods and that shortly thereafter the warehouse is destroyed by fire which originates in another building not owned by Lee & Co. Can King & Co. recover from Lee & Co. for the loss of the merchandise? Why?

— 5 —

What is the usual way by which the consignee is reimbursed for selling the goods of the consignor?

— 6 —

If the consignee pays certain expenses, such as freight, insurance, drayage, etc., in connection with goods received from the consignor, how is he entitled to reimburse himself for these expenses?

— 7 —

What advantages may be derived from selling goods on consignment?

— 8 —

When a consignee has sold the goods of the consignor, in what way does he report to the latter?

— 9 —

Explain and illustrate the method of recording consignments on the records of the consignor.

— 10 —

Explain and illustrate the method of recording consignments on the records of the consignee.

— 11 —

In taking an inventory for James Madison & Co. you find that $500.00 worth of goods have been shipped on consignment to Henry Adams & Co. To date no account of sales has been received in connection with this consignment. Explain how you would treat these goods in connection with the inventory of Madison.

— 12 —

Assuming that you were taking the inventory of Adams & Co. and that the goods received from Madison are still on hand, how would you treat these goods in connection with the inventory of Adams & Co?

— 13 —

If Adams & Co. has paid $75.00 for freight and drayage on the goods of Madison & Co., how would you show this on their Balance Sheet at the end of the fiscal period?

— 14 —

L. S. Lyon ships to Harvey T. Lane, to be sold on his account, two hundred articles of X commodity. Lyon pays $40.00 for drayage and $20.00 for insurance on the merchandise. Lane pays freight and drayage, $112.00, and charges $41.50 for storage charges. He sells the goods for $920.00, charges five per cent. commission and remits the net proceeds by New York draft. Explain the entries which should be made on the books of both Lyon and Lane.

LABORATORY MATERIAL

Exercise No. 231

May 1 the Cooperative Fruit Growers Association shipped 1,000 crates of strawberries to Morrow & Gray, commission merchants of St. Louis, to be sold for the former's account and risk. During the month of May, Morrow & Gray completed the following transactions relating to this shipment:

3. Paid $461.40 freight.

4. Sales on account: Miller Grocery Stores, 100 crates at $40.00; Grand Hotel, 10 crates at $45.00; E. Caproni, 10 crates at $45.00.

   Cash sales, 80 crates at $45.00, less 2% cash discount.

5. Sales on account: Miller Grocery Stores, 50 crates at $40.00; Lake Hospital, 12 crates at $45.00; Business Men's Club, 10 crates at $45.00.

   Cash sales, 127 crates at $45.00, less 2% cash discount.

6. Sales on account: Miller Grocery Stores, 50 crates at $40.00; Grand Hotel, 15 crates at $42.50.

   Cash sales, 142 crates at $42.50, less 2% cash discount.

   Business Men's Club claim shortage of 6 boxes in one crate sold May 5. This shortage seems to have resulted from careless inspection by the shipper, since the empty boxes were all on the bottom layer of the crate. Granted allowance of $2.40.

7. Sales on account: Miller Grocery Stores, 50 crates at $40.00; Green Steamship Lines, 10 crates at $40.00.

   Cash sales, 233 crates at $40.00, less 2% cash discount.

8. Sale on account: Miller Grocery Stores, 50 crates at $40.00.

   Cash sales, 44½ crates at $35.00.

   Miller Grocery Stores ask for deduction of $3.60 for a total of 9 boxes damaged by careless handling by our truckmen. This claim was found to be justified, and accordingly credit was granted.

10. Rendered an account sales to the Cooperative Fruit Growers Association. Spoilage amounted to 6½ crates. Charges made by Morrow & Gray were as follows: commission, 5%; storage and refrigeration, $2.00 per crate; drayage, $12.00. A check was remitted for the net proceeds.

INSTRUCTIONS: 1. Prepare, in journal form, entries to record these transactions on the books of Morrow & Gray, and post to the ledger.

2. Prepare, in journal form, entries to record the transactions that would appear on the books of the Cooperative Fruit Growers Association, and post to the ledger.

3. Assuming items and amounts, record the costs incurred by the Cooperative Fruit Growers Association in connection with this consignment.

Exercise No. 232

October 31 the Modern Appliances Company delivers, via Schippers Express, ten Peerless electric washing machines to the Randolph Department Store, to be sold on consignment. A package containing advertising matter for free distribution, cost \$6.20, is included with the shipment. The charge of \$2.50 for drayage, made by Schippers Express, and \$8.40 for one years' insurance, are paid by the consignor.

The Modern Appliances Company provides a washing machine for demonstration purposes, and reimburses the consignee for the salary of a salesman from its office to demonstrate the machine. The consignor is to pay 10% commission, 50c delivery charges on each machine sold, and storage at 40c per week per machine.

The following transactions relating to the consignment are completed by the Randolph Department Store during the month of November:

2. Sold a washer for cash, \$180.00.

9. Sold a washer to Mrs. D. M. Henshaw at \$200.00. Received \$20.00 cash, the balance to be paid in twelve equal monthly instalments.

15. Paid salesman's salary for first half of month, \$50.00.

16. A fire originating in an adjoining building spread to the warehouse of the Randolph Department Store and damaged the eight remaining washers to such an extent that they were sold as scrap metal for \$1.00 each.

18. Rendered an account sales to the Modern Appliances Company. In addition to the charges stated in the consignment agreement, a charge of \$2.75 was made for soap and other supplies transferred from stock for use in demonstrating the machine. Half the advertising matter included in the original shipment is on hand. A check was received from the Modern Appliances Company for the amount due.

20. A second consignment of ten Peerless washing machines was received from the Modern Appliances Company, on which

the latter paid drayage charges of $2.50 and insurance of $8.40 for one year.

23. Sold a washer for cash, $180.00.

25. Paid salesman $1.25 to reimburse him for expenses incurred on trip to examine machine sold Nov. 23. Found machine defective, and replaced it from stock. Returned defective machine to Modern Appliances Company by Schippers Express, 50c charges collect.

27. Sold J. H. Muddleton a washer at $200.00. Received $20.00 cash, the balance to be paid in twelve equal monthly instalments.

29. Sold T. R. Rose a washer at $200.00. Received $50.00 cash, the balance to be paid in twelve equal monthly instalments.

30. Paid salesman's salary for last half of month, $50.00.

30. Rendered an account sales to the Modern Appliances Company for sales to date. Soap and other supplies transferred from stock for use in demonstrating the machine amounted to $3.10. The remainder of the package of advertising matter, and about a tenth of an identical package received today, have been used. A check for the amount due will be sent the Modern Appliances Company when the remainder of the consignment has been sold.

INSTRUCTIONS: 1. Prepare, in journal form, entries to record these transactions on the books of the Randolph Department Store, and post to the ledger.

2. Prepare, in journal form, entries to record these transactions on the books of the Modern Appliances Company, and post to the ledger. Assume that this company received $640.00 from the insurance company to cover the fire loss, and that the factory cost of each machine was $89.60.

3. Show how these consignments and transactions relating to them will affect the Balance Sheet and Statement of Profit and Loss of each company, prepared November 30.

CHAPTER LXIII

SALES ANALYSIS AND SALES REPORTS

Purpose of Sales Analysis

The primary purpose of the sales records discussed in the two preceding chapters is to show the effect of the various kinds of sales made by a company on its financial condition. These records provide the information with reference to sales which is needed for the preparation of the standard form of Statement of Profit and Loss.

The executives may need additional data for judging the results of their sales methods and the efficiency of their sales personnel. This information is obtained by analyzing sales to show the data which are desired for this purpose, and these data are presented by means of proper reports.

Classification of Sales Data

It is not possible to give an arbitrary classification of sales data or even to discuss all the various classifications which may be made. The proper classification in any specific case depends on the organization of the business, the nature of its operations, and the desires and needs of its executives. Some of the customary ways of classifying sales data are:

(1) By commodities or departments
(2) By selling units
(3) By territories
(4) By salesmen
(5) By terms of sale
(6) By method of delivery

Most firms will not need to maintain all of these classifications. Each of these is useful to some firm, however, and most of them find it desirable to have two or more classifications of sales data.

Commodity or Departmental Analysis

One of the most useful classifications of sales is that by commodities. Such a classification gives very definite information

with which to check results and to plan sales campaigns. If purchases and inventories can be classified in the same manner, it is possible to obtain gross profit on each commodity, and this affords a desirable check on the profitableness of each commodity sold. If expenses can be allocated so that they can be classified in the same manner, the net profit made on each commodity is obtained, and this affords excellent cost and profit statistics. In a few lines of business, such a classification is possible. For example, in a firm selling only coal, wood, and ice, a commodity analysis of sales, purchases, and inventory is easily made and expenses can be allocated to commodities without great difficulty.

In a business dealing with many articles, such an analysis is impossible. In such cases it is customary to group items of a similar nature into departments, and to classify sales, purchases, and expenses on a departmental basis. For example, in a large department store, there may be a grocery department, shoe department, men's clothing department, women's clothing department, furniture department, etc., with sales, purchases, and expenses classified accordingly.

In some firms where it is not satisfactory to have departments, commodities may be classified into groups, and gross profit obtained on each group. For example, a foundry may group its castings according to weight and design, and classify its costs and sales on this basis.

Analysis by Selling Units

A firm which has its sales force organized into definite administrative units will find useful an analysis of sales by sales units. For example, some firms establish branches through which they market their goods. In such cases it is desirable to know the profit derived from each branch. To do this it is necessary to classify sales, purchases, and expenses by branches. This affords an effective check on the operations of each branch, and affords a means of judging the efficiency and ability of the manager of the branch. In many cases the manager is given a percentage of the profits made by the branch. This plan affords an incentive for him to manage the branch as efficiently as possible.

If a firm has a separate organization for export trade, the sales and costs of this unit should be shown separately so the net profit or loss on export trade can be obtained. If the sales organization is divided into divisions or districts, it is desirable to know the sales of each.

Analysis by Territories

Sometimes it is useful to have a territorial analysis of sales. The territory used as the basis for the analysis may be a state,

or it may be the territory covered by a salesman. Such an analysis may be desirable for the purpose of checking the efficiency of the salesmen, or for planning future sales.

The conditions in different states may affect the possible future sales. For example, the poor crops in a particular state may indicate that the probable sales in that state for the coming year will be fifty per cent less than during the preceding year. If sales have been analyzed to show the sales in this state during the past years, the estimated sales for the coming year can be obtained by subtracting the estimated decrease. In the same manner, the probable increase of sales in the prosperous states can be determined.

Again, a company may from observation and investigation, or from statistics which it has available, ascertain that the potential sales of the commodity which it sells in a given territory are a certain amount. If sales are analyzed to show past sales in this territory, the company can determine how far it fails to obtain the amount of sales which is possible, and can judge whether additional effort should be spent in this territory.

Analysis by Salesmen

In large retail stores it is customary to pay the salesman, in addition to his stipulated salary, a commission on sales made. To determine the amount of this commission, it is necessary to analyze the sales by salesmen. Such an analysis not only serves as a basis for paying the salesmen, but also serves as an efficiency record for the salesmen. The information shown by this record is useful in selecting employes for promotion. Not only retail salesmen, but also traveling salesmen for jobbers and manufacturers, may be paid a commission on the sales which they make. In some cases the cost of the goods sold by each salesman is determined, and he is given a percentage of the gross profit made on his sales. This method is employed to encourage the salesmen to sell the lines of goods on which the greatest profit is made.

Analysis by Terms of Sale

The treasurer of a company must plan to secure the funds necessary to pay for the goods purchased and for the expenses of the business. A large part of these funds must come from the customers. The length of time which the business must wait after sales are made before it will secure payment depends upon the terms on which the sales are made. That the treasurer may estimate the funds which may be secured from the sales made, it is necessary that he know the amount of sales made on each term offered by the company. In some companies, therefore, it is desirable that sales be analyzed to show the terms of sale.

Analysis by Method of Delivery

Some firms deliver goods by various methods. Large retail stores, for example, may deliver:

(1) Over the counter
(2) By delivery trucks
(3) By messenger
(4) By mail
(5) By express or freight

An analysis of sales by methods of delivery is useful:

(1) In judging variations in delivery costs from period to period
(2) In estimating the selling cost of a proposed sales program
(3) In planning equipment and personnel to meet the sales program after it is adopted

Many stores have found that their delivery costs have steadily mounted during recent years. This is due, in part, to the decreasing number of customers who carry their purchases. It is due, in part, to the increasing distances covered by the large stores. Many stores have found it advisable to place limitations on their delivery service, and to instruct salesmen to encourage the customer to take his purchases with him, in so far as this can be done in a politic way. An analysis of sales by method of delivery will show tendencies, and this information will show when and where remedial measures should be taken.

Relation of the Sales Analysis to the Accounting Records

It is usually not practicable or feasible to obtain from the formal accounting records all the analyses of sales desired. Some of these analyses may be obtained from statistical records kept in the various departments, or they may be obtained by a central statistical department. The operating department may keep a record of the method of delivery. The advertising manager may have the sales tickets tabulated in his office to indicate sales by territories. Other officials may record other data which they need.

In many cases tabulating machines are used to collect the statistical data needed by the various departments. By means of cards which are punched to indicate various classifications of data, and are then assorted and assembled, it is possible to obtain various kinds of information. In case considerable statistical information is necessary, the use of tabulating machines is profitable. The method of using such machines is discussed in Chapters

LXXII and LXXIII. Central control of the collection of all statistical data is usually preferable, when this is practical.

Need for Analysis of Sales Expense

Making a formal statement of sales desired does not produce the sales. Concrete plans must be made for the procurement of the sales called for by the sales program, and definite and energetic efforts made to carry out these plans. There must be a sales campaign as well as a sales program. The costs of the sales campaign must be considered carefully in preparing the sales program. There are few firms that could not increase their sales if they were willing to incur the necessary expense. Typically, sales are desirable only when profits will result and the probable profits should be estimated before an attempt is made to secure the sales.

Scientific sales planning involves the constant balancing of sales volume against cost. To control selling expense effectively, it is necessary to analyze it so that the expense incurred can be correlated with the results obtained.

Methods of Analyzing Sales Expense

The orthodox method of classifying sales expense is that shown on the standard form of Statement of Profit and Loss. On this statement, sales expense is usually classified under the following headings:

(1) Sales office expense
(2) Salesmen's salaries and expense
(3) Packing and shipping
(4) Advertising

As much detail can be shown under these headings as the executives of the business desire. The amount of this detail depends to a considerable extent on the size of the business.

In addition to the analysis shown by the Statement of Profit and Loss, it is usually desirable to make a more detailed analysis for the use of the executives of the sales department. It is desirable, when possible, to have this analysis correspond as closely as possible to the analysis made of sales. For example, if sales are classified by commodities, it is very useful to have sales expense classified in the same manner. Sometimes this is quite difficult to do and the expense involved in making such an analysis may be prohibitive. If sales are analyzed by territories, it is wise to analyze sales expense in the same manner. In a mercantile company, when sales are classified by departments, it is customary to classify selling expense in the same manner. By so doing it is possible to show quite definitely the relation between

selling expense and the results obtained from this expense. Some companies even go so far as to analyze selling expenses by salesmen. For example, in the packing industry some companies classify the selling expenses of the car routes by salesmen so as to show the net profits obtained from the sales of every salesman.

In all cases it is necessary to consider carefully the value of the information obtained from such an analysis and the cost involved in making it. Most companies, however, could profitably carry their analysis further than they do.

Sales Reports

A variety of reports is required to present for admininstrative use the information needed for controlling sales operations. Each unit of the sales organization needs reports on the operations of its subordinates. For example, the branch manager needs reports showing the operations of salesmen who report to him; the superintendent of the branches needs reports covering the operations of the branches under his jurisdiction; and the sales manager needs reports covering the operations of units of the sales organization. In addition, the chief executive and board of directors need sales reports giving summarized information concerning sales operations.

It is impossible to describe all the reports needed by these various units of the organization. Neither is it possible to state definitely which unit should receive any specific report. In each company it is necessary to study carefully the nature of its sales operations and the nature of the supervision given salesmen in order to ascertain the reports needed for controlling sales.

We will discuss a few sales reports for the purpose of indicating the type of report which may be used.

The Sales Estimate

One report of primary importance to the board of directors and executives is the *sales estimate.* It gives them an opportunity to pass on sales plans before these plans are executed. It also gives them an opportunity to check up the plans of the other departments in terms of the sales plans, and vice versa. The sales estimate should be represented in such form that it will show (1) the sales classified by units of organization or classes of commodities or both; (2) a comparison between estimated sales of this period and actual sales of last period; and (3) the estimated results from the sales of this period compared with the actual results from sales of the last period. A form suitable for this purpose in a mercantile business organized on a departmental basis is shown in Illustration No. 147.

DEPARTMENTAL BUDGET

Period.............................

Department	Inventory Beginning of Period	Last Period's Sales	Gross Mark-up Last Period	Estimated Sales This Period	Estimated Mark-up This Period	Estimated Gross Profit	Estimated Purchases	Estimated Cost of Sales	Estimated Inventory at End of Period
A......									
B......									
C......									
D......									
E......									
F......									
Etc....									
....									
....									
Totals									

Illustration No. 147, Departmental Sales Estimate

The sales estimate usually shows a variation from past sales. The information on which the estimated change is based should be presented to the directors and executives in condensed form. Graphs can often be used to advantage for this purpose. For example, it may have been found that the cycle trend of the company's product lags six months behind the general cycle trend. By a graph the general trend can be shown and the probable future trend of the company's product shown by another graph with the appropriate lag between the two.

A report on general market conditions accompanied by a discussion of their probable effect on the sales of the company is also useful. This information can be presented by graphs or tables. The former are usually more understandable to the executive. The sales executives will have, of course, various reports containing the information obtained by sales research.

The form of sales estimate shown in Illustration No. 147 gives the total sales for the budget period. The sales executives, the treasurer, and the buyer want a statement showing the sales distributed by months and by departments or classes. In manufacturing firms this report may show estimated sales by items. A possible form for this report is shown in Illustration No. 148.

Report on Estimated Selling Expenses

A companion report to that shown in Illustration No. 147 is one showing the estimated cost of securing the estimated sales. Illustration No. 147 shows the estimated gross profits, but the

MONTHLY ESTIMATE OF SALES

Dept. or Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
......													
......													
......													
......													
......													
......													
......													
......													
......													
......													
......													
......													
Totals													

Illustration No. 148, Monthly Estimate of Sales

directors and executives are primarily interested in net profits. A report made in the form of Illustration No. 149 shows the estimated selling expenses in useful form. By subtracting the total estimated selling expenses as they are shown in Illustration No. 149 from the total estimated gross profit as shown by Illustration No. 147, the estimated net selling profit can be obtained. If it is possible to allocate the selling expenses by departments or commodities, two additional columns can be added to Illustration No. 147 and the estimated selling expenses and estimated net selling profit shown on this statement.

SELLING EXPENSE BUDGET

Period.................... Season....................

Items	Appropriation Last Period	Ratio to Sales of Last Period	Original Appropriation for This Period	Ratio to Original Sales Expectancies	Additions	Deductions	Present Appropriation	Ratio to Present Sales Expectancies	Comments
....									....
....									....
....									....
....									....
....									....
....									....
....									....
Totals									....

Illustration No. 149, Selling Expense Estimate

Report on Volume of Sales

Another report of primary importance to executives is one showing a comparison of actual sales with estimated sales. A useful form for this report is shown in Illustration No. 150. Several useful comparisons are shown on this report. Estimated sales for the month, estimated sales for the year to date, sales of last year to date, and sales for last month are all used as standards by which to judge current performance. If the sales force is organized by departments, branches or districts, this report makes possible the use of the performance of each unit as a standard for judging the performance of all other units.

MONTHLY REPORT OF SALES

Month of............19...

Dept.	This Month	Estimated This Month	% Inc. or Dec.	Last Month	% Inc. or Dec.	To Date This Year	Estimated to Date This Year	% Inc. or Dec.	To Date Last Year	% Inc. or Dec.
A.......										
B.......										
C.......										
D.......										
E.......										
F.......										
Etc.....										
....										
....										
Totals ..										

Illustration No. 150, Monthly Report of Sales

Reports on Selling Expense and Net Profits

Two companion reports to the report on sales volume are the monthly report on selling expense and the monthly report on net profits. The form of these reports is shown in Illustrations Nos. 151 and 152 respectively. The report on selling expenses provides a means of:

1. Checking actual expenses against estimated expenses.

2. Comparing the ratio of expenses to sales during the current and past periods. This comparison is of especial importance, as increases and decreases in selling expenses are of significance only in comparison with the results obtained.

3. Comparing the ratio of expenses to sales in different selling units. This comparison is significant in judging the efficiency of departmental executives.

MONTHLY REPORT ON SELLING EXPENSE Month of..........19....							
Department	This Month	Estimated	Per Cent Increase or Decrease	Ratio Estimated Expense to Estimated Sales	Ratio Actual Exp. to Actual Sales	Ratio Exp. to Sales to Date This Year	Ratio Exp. to Sales to Date Last Year
A..........	....	....	......	......	......	......	......
B..........	....	....	......	......	......	......	......
C..........	....	....	......	......	......	......	......
D..........	....	....	......	......	......	......	......
E..........	....	....	......	......	......	......	......
F..........	....	....	......	......	......	......	......
Etc..........	....	....	......	......	......	......	......
Totals.........	....	....	......	......	......	......	......

Illustration No. 151, Monthly Report on Selling Expense

The report on net profits affords a means of:

1. Checking actual net profits against estimated net profits.

2. Comparing the ratio of net profits to sales during the current period with the same ratio for the past year. This comparison is a very important one, since it is not an increase in sales but an increase in profits that is the goal.

3. Comparing the ratio of profits to sales in different selling units. This comparison is useful in judging the efficiency of the management of the various units.

MONTHLY REPORT ON NET PROFITS Month of..........19....											
Dept.	This Month	Estimated This Month	Per Cent Increase or Decrease	Last Month	Per Cent Increase or Decrease	Same Month Last Year	Per Cent Increase or Decrease	Ratio to Sales for This Year	Ratio of Estimated Profit to Estimated Sales	Ratio of Net Profit to Sales for Last Year
A........	....	....	.....	....	.....	....	.....	.....	.....	.....
B........	....	....	.....	....	.....	....	.....	.....	.....	.....
C........	....	....	.....	....	.....	....	.....	.....	.....	.....
D........	....	....	.....	....	.....	....	.....	.....	.....	.....
E........	....	....	.....	....	.....	....	.....	.....	.....	.....
F........	....	....	.....	....	.....	....	.....	.....	.....	.....
Etc.......	....	....	.....	....	.....	....	.....	.....	.....	.....
Total ..	....	....	.....	....	.....	....	.....	.....	.....	.....

Illustration No. 152, Monthly Report on Net Profits

Sales Reports for Department Members

If a company has its sales force organized on a departmental basis, the head of each department is interested in the sales of his products in each of the sales units. As a consequence, each of the sales units may prepare a separate report for the head of each of the sales departments. Illustration No. 153 shows such a report which the manager of a sales branch submits to the head of one of the sales departments at the general office. The information on this report is self-explanatory.

THE XYZ MANUFACTURING COMPANY

SEMI-ANNUAL REPORT ON OPERATIONS, DECEMBER 31, 1927

Prepared by Latimer Branch for General Office Sales Department A-5

Item	Per Bag	Six Months Ending December 31		% Inc. or Dec.	Year Ending December 31		% Inc. or Dec.
		1927	1926		1927	1926	
COST OF GOODS SOLD:							
Materials Used	.50	5648.15	5965.05	—5	11257.86	10841.74	4
Bags and Bagging	.24	2711.04	2394.14	13	4518.48	3990.24	13
Materials Storage.	.04	451.84	399.02	13	753.08	665.04	13
Total.	.78	8811.03	8758.21	.6	16529.42	15497.02	7
SELLING EXPENSES:							
Finished Goods Storage . . .	.02	225.92	199.51	13	376.54	382.52	—2
Commission Paid.	.84	9488.64	8379.50	13	15814.68	13965.84	13
Shipping and Loading	.11	1242.56	991.35	25	1870.97	1452.24	29
Out-freight.	.25	2824.00	1858.08	52	3506.75	2396.79	46
GENERAL EXPENSES:							
Collection Charges	.001	11.30	9.98	13	18.83	16.63	13
Registration Expense	.009	102.00	102.00		170.00	170.00	
Office Expense	.03	338.54	292.96	16	552.91	438.27	26
Total.	1.26	14232.96	11833.38	20	22310.68	18822.29	19
SUMMARY							
Gross Sales.	2.30	25980.80	22943.88	13	43302.10	38239.80	13
Sales Deductions:							
Adjustment on Sales.	.002	22.60	69.94	-68	37.65	133.24	-72
Trade Discount	.028	316.28	229.32	39	527.16	365.53	44
Net Sales.	2.27	25641.92	22644.62	13	42737.29	37741.03	13
Cost of Goods Sold	.78	8811.03	8758.21	.6	16529.42	15497.02	7
Gross Profit on Sales. . .	1.49	16830.89	13886.41	21	26207.87	22244.01	18
Expenses	1.26	14232.96	11833.38	20	22310.68	18822.29	19
Net Profit	.23	2597.93	2053.03	27	3897.19	3421.72	14
Total Number of Bags Shipped .		11296	9976	13	18827	16626	13
% Net Profit to Sales.		10%	9%		9%	9%	

Illustration No. 153, Branch Sales Report

Salesmen's Reports

Except in the very small retail store where the owner is in intimate contact with all his employes, it is necessary to have some kind of reports by which to judge the work of salesmen. In a retail store it is customary to have sales classified by salesmen and a report prepared showing the sales made by each salesman. In many stores this report is given to the salesman as well as to the executives. The salesman can see from this report what he is accomplishing himself and can check his work against that of his fellow-employes. A simple form of report for this purpose is shown in Illustration No. 154. This can be prepared by the accounting or statistical department from the duplicate sales tickets submitted by the salesmen.

REPORT ON SALES AND LABOR COST

DEPARTMENT 25 MONTH March 19__

Name of Employee	Net Sales		No. Days	Weekly Salary		%	Standing
M. Dawson	1919	02	27	25	–	5.2	3
C. Cline	2201	70	25	17	–	4.4	1
O. Mason	1943	30	27	15	–	3.9	2
F. Horner	790	88	27	12	50	6.3	8
J. Jones	1080	74	18	16	–	6.0	6
A. Barnes	1079	89	27	13	–	4.8	7
E. Eaton	1262	95	21	17	50	5.5	4
L. Hanson	1262	70	27	16	–	5.0	5

MONTHLY TOTALS
Salaries $ 554.75
Sales 11541.18

Average % Labor Cost to Sales 4.8 %

Illustration No. 154, Report Showing Comparison of Sales and Labor Cost by Employes

If a company has traveling salesmen it must usually depend on them for at least three reports: (a) sales order, (b) report on prospects, and (c) expense report. The company supplies the

salesman with sales-order blanks, and it is only necessary for him to fill in the required information and forward it to the sales office when he receives an order.

The salesman may make a report each day on the prospects on which he has called and the results of his visits. In some cases a card record of prospects is maintained. One part of the card contains information concerning the prospect. The second part shows the results of the salesman's efforts to sell this prospect. If the prospect originates with the salesman, he fills out both parts of the card. If the prospect originates with the office, it fills out the first part of the card and sends it to the salesman; he fills in the second part and returns it to the office. This plan works satisfactorily as a report of the first call of the salesman on the prospect. If, as is often the case, it is necessary for him to call more than once in order to sell a prospect, it is not so satisfactory, for it requires the copying of the old card on the new card, either by the salesman or the home office.

If the company pays the expenses of its salesmen, it needs reports showing what their expenses are. These reports are quite simple in form since it is only necessary that they show the expenses which the salesmen have incurred for a certain period of time classified according to the wishes of the home office.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The Mason Company has fourteen departments. The head of each department is paid a nominal salary and in addition a percentage of the profits of the department. Explain what is necessary to make this plan effective.

— 2 —

Satisfactory results have been obtained from paying a bonus to the heads of the departments, and the company desires to work out a similar plan for the payment of sales clerks. Explain how this may be accomplished, and show in what way the plan used in paying the clerks will be different from the plan used in paying the departmental heads.

— 3 —

The Wilder Manufacturing Company has six branches, each of which is under the management of a branch manager. It desires to encourage the branch managers to exercise more efficient administration by giving them an interest in the profits of their respective branches. Outline a procedure for doing this.

— 4 —

Outline a procedure for the salesmen of the Wilder Manufacturing Company similar to that for branch managers required in the preceding question.

— 5 —

The customers of the Glidden Department Store have complained because of the slow deliveries of merchandise which they purchase from the store. The general manager has requested the superintendent of the delivery department to make plans to give more efficient service in the future. What information will be needed to do this? How may it be obtained?

— 6 —

The Harland Mercantile Company finds that it needs the following analysis of sales: (a) by salesmen, (b) by departments, (c) by terms of sale, and (d) by methods of delivery. Explain how each of these analyses may be obtained, and why it is needed.

— 7 —

The Camden Department Store offers a 20% discount on sales to employes. The principal purchases made by employes are of wearing apparel, the largest being in the ladies' ready-to-wear department. Employes from all departments of the store make these purchases. In the past, discounts on employes' purchases have been treated as deductions from the sales of the department making the sale. The head of the ladies' ready-to-wear department contends that this method is unfair and that these discounts should be treated as "labor cost" of the department in which the employe works. What is your opinion?

— 8 —

The Johnson Company has for many years been exclusively a shoe store for women. Up to this time, purchases have been made from a great many different manufacturers, and as a result, a considerable quantity of odd lots of shoes of different makes has been accumulated. The manager decides to reduce the number of lines carried to not more than four, and wants to know which of the makes now being offered for sale are the most profitable. How may he obtain this information?

— 9 —

The Hamilton Brush Company requires its salesmen to make a written report of each call to the sales manager, showing (a) date of call, (b) name and address of customer or prospect, (c) nature of business, (d) approximate volume of business, (e) lines now carried, (f) samples left, and (g) other pertinent information. One of the company's salesmen objects to making these written reports, saying that he knows his territory and should not be required to do clerical work. Explain why the sales manager needs this information, and how it may be used to help the salesman increase his sales.

— 10 —

During the Christmas holiday season, in a city of 400,000 population, a gift set of pen and pencil of a well-known make sold at $6.50 in a popular-priced department store, at $8.50 in a more exclusive shop, and at $9.00 in a local retail branch of the pen and pencil manufacturer. (a) Explain the probable reason for this variation in the sales price of the same article. (b) What effect would you expect it to have on the sales of this set by each of the three stores?

LABORATORY MATERIAL

Exercise No. 233

The employees in each merchandise department of the Denton Department Store are paid a bonus of 10% on sales in excess of their "quotas". In the handkerchief department, the weekly sales quota for each clerk is $115.00, and the weekly salaries as shown by the payroll are as follows:

Clock No.	Name	Weekly Salary	Clock No.	Name	Weekly Salary
362	Violet Tierney	$10.00	368	Catherine Trarbach	$12.00
363	Clara Condon	18.00	369	Anna Mayer	10.00
364	Josie Lever	15.00	370	Helen Black	18.00
366	Mildred Shrorer	10.00	371	Helen Sutherland	12.00
367	Claribel Pendery	12.00	372	Anna May Rulfs	15.00

Each clerk prepares a sales slip in triplicate for each sale, and enters its amount on a daily card record attached to the pad of sales slips. At the close of each day, the triplicate sales slips are sent to the sales department, where they are used to verify the employee's card record of daily sales. The sales department also receives, from the returned goods desk, the duplicate "returned goods credit" slips showing the amount of merchandise returned by customers and the number of the clerk who made the original sale. The sales department records daily the gross sales and the sales returns applicable to each employee, and reports the net weekly sales of each employee to the payroll section for use in ascertaining bonus on sales in excess of quotas.

A summary of the gross weekly sales and weekly sales returns by employees in the handkerchief department for the month of February is shown in tabular form below.

GROSS SALES AND SALES RETURNS BY EMPLOYEES HANDKERCHIEF DEPT.

Clock No.	February 2–7		February 9–14		February 16–21		February 23–28	
	Gross	Returns	Gross	Returns	Gross	Returns	Gross	Returns
362	$ 119.75	....	$ 117.23	$ .75	$ 118.70	....	$ 120.95	$1.25
363	128.43	$ .98	135.75	....	123.89	....	131.50	....
364	105.65	1.29	103.40	....	98.75	$1.25	107.23	....
366	115.33	....	119.89	....	122.10	....	116.60	....
367	110.00	....	112.28	.35	116.99	....	118.30	1.29
368	119.95	....	125.70	....	123.49	....	130.05	....
369	95.75	....	101.50	2.19	102.33	.49	108.20	....
370	117.76	.29	121.33	....	120.15	....	126.65	....
371	109.98	....	113.20	....	112.00	....	115.90	....
372	123.15	....	126.50	....	124.30	....	128.45	....
Totals	$1,145.75	$2.56	$1,176.78	$3.29	$1,162.70	$1.74	$1,203.83	$2.54

An employee in the payroll section records, from the time cards, the number of days worked by each employee during the week. This is used by the payroll section in figuring regular salary to be paid, as deductions are made for all lost time; a duplicate is used by the personnel department to check the frequency and causes of absences. The weekly payrolls of the handkerchief department during the month of February are shown below.

PAYROLL FOR WEEK ENDING FEB. 7
HANDKERCHIEF DEPT.

Clock No.	Days	Salary	Bonus	Total
362	6	$ 10.00	$ .48	$ 10.48
363	6	18.00	1.25	19.25
364	5	12.50	......	12.50
366	6	10.00	.03	10.03
367	6	12.00	......	12.00
368	6	12.00	.50	12.50
369	5½	9.17	......	9.17
370	4	12.00	.25	12.25
371	6	12.00	......	12.00
372	6	15.00	.82	15.82
Totals	.....	$122.67	$3.33	$126.00

PAYROLL FOR WEEK ENDING FEB. 14
HANDKERCHIEF DEPT.

Clock No.	Days	Salary	Bonus	Total
362	6	$ 10.00	$ .15	$ 10.15
363	6	18.00	2.08	20.08
364	6	15.00	......	15.00
366	6	10.00	.49	10.49
367	4	8.00	......	8.00
368	5½	11.00	1.07	12.07
369	5½	9.17	......	9.17
370	6	18.00	.63	18.63
371	6	12.00	......	12.00
372	6	15.00	1.15	16.15
Totals	.....	$126.17	$5.57	$131.74

PAYROLL FOR WEEK ENDING FEB. 21
HANDKERCHIEF DEPT.

Clock No.	Days	Salary	Bonus	Total
362	6	$ 10.00	$ .37	$ 10.37
363	6	18.00	.89	18.89
364	5½	13.75	......	13.75
366	6	10.00	.71	10.71
367	6	12.00	.20	12.20
368	6	12.00	.85	12.85
369	5½	9.17	......	9.17
370	6	18.00	.52	18.52
371	6	12.00	......	12.00
372	6	15.00	.93	15.93
Totals	.....	$129.92	$4.47	$134.39

PAYROLL FOR WEEK ENDING FEB. 28
HANDKERCHIEF DEPT.

Clock No.	Days	Salary	Bonus	Total
362	6	$ 10.00	$ .47	$ 10.47
363	6	18.00	1.65	19.65
364	6	15.00	......	15.00
366	6	10.00	.16	10.16
367	5½	11.00	.20	11.20
368	6	12.00	1.51	13.51
369	2½	4.17	......	4.17
370	6	18.00	1.17	19.17
371	5½	11.00	.09	11.09
372	6	15.00	1.35	16.35
Totals	.....	$124.17	$6.60	$130.77

INSTRUCTIONS: 1. As assistant to the sales manager, prepare a report similar to Illustration No. 154 for use in ascertaining the relative efficiency of employees in the handkerchief department.

2. Comparing the individual ratios of labor cost to net sales with that for the department as a whole, name the employees you would recommend for salary increases.

Exercise No. 234

The sales manager desires a monthly report showing the net selling profit by departments. You decide to include in selling expenses: (a) sales manager's salary, (b) departmental salaries and wages, (c) advertising, and (d) delivery expenses.

INSTRUCTIONS: Write a letter to the chief accountant, explaining what you think is an equitable basis for apportioning these expenses to the sales departments.

Exercise No. 235

The monthly net sales, cost of sales, selling expenses, and net selling profit by departments for the winter season (December-January-February) are tabulated below. Other operating expenses not apportioned to the departments amounted to $1,614.70.

Departmental Analysis Showing Net Selling Profit by Departments
Season: Winter Months: Dec.-Jan.-Feb.

Departments	Net Sales	Cost of Sales	Selling Expenses	Net Selling Profit or Loss
Ready-to-wear....	$ 9,918.64	$ 3,195.06	$ 5,850.90	$ 872.68
Millinery.........	3,592.81	836.70	4,008.36	*−1,252.25*
Lingerie..........	9,883.35	6,930.81	1,878.43	1,074.11
Hosiery...........	7,706.10	4,569.36	1,780.89	1,355.85
Glove.............	5,377.20	4,179.55	834.99	362.66
Shoe..............	9,354.08	4,628.80	3,317.75	1,407.53
Handkerchief	4,678.93	2,775.25	1,140.16	763.52
Notions...........	3,311.46	2,486.88	564.63	259.95
Totals............	$53,822.57	$29,602.41	$19,376.11	$4,844.05

INSTRUCTIONS: 1. Prepare a report for the sales manager showing these facts and such percentages as you think might be of value.

2. Explain the significance of the results shown by the report you have prepared.

CHAPTER LXIV

ACCOUNTING FOR PURCHASES AND INVENTORIES

Need for Control of Purchases and Inventories

All mercantile and industrial firms must make frequent purchases of commodities. In a mercantile business, such as a department store, the goods to be sold are purchased in the finished or salable form. In a manufacturing firm, the raw materials used in the production of the commodity or service sold must be purchased. Usually the cost of these materials constitutes a large part of the cost of the finished product.

What constitutes finished stock in a particular business depends upon the character of the product offered for sale to the customers of the business. The finished stock of the King Foundry Company becomes the raw material of the Jones Desk Manufacturing Company. The lumber, as it comes from the mill of a lumber company, may be finished stock if the lumber company offers the green lumber for sale to its customers; or the sawed lumber may be seasoned and planed and so made into finished lumber of the higher grades. Materials are either (a) raw materials; (b) goods in process; or (c) finished stock, depending upon the stage of their utility to the customers of the selling company. For census purposes materials may be classified as "raw materials" or "basic materials," but that classification does not hold in the reports of any specified company, where the only test must be that finished stock is stock in the form demanded by customers.

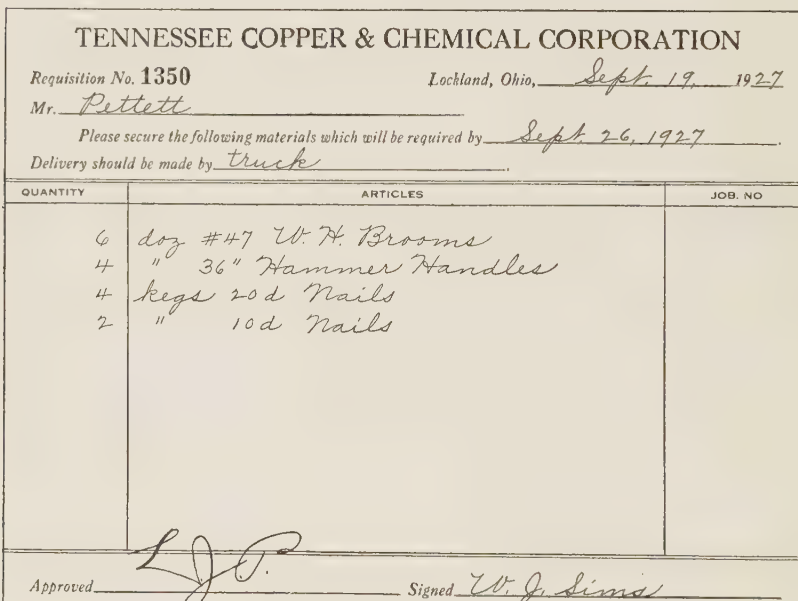
The finished stock of a company may be produced in the factory of the company from raw materials; or it may be assembled and altered from parts in the alteration room of the company; or it may be purchased as finished stock. In any case, purchases must be made either of the finished material or of its components. The transactions arising from the purchases made usually constitute a considerable portion of the total transactions of the business. In order that these transactions may be recorded easily and accurately, it is necessary that the procedure followed and the forms used by the purchasing department be such that the information necessary to serve as a basis of the accounting entries may be presented in a convenient and accurate form.

Forms Used in Purchasing

The most important forms used in purchasing are (a) the purchase requisition, (b) the purchase order, and (c) the purchase invoice. There are other miscellaneous forms which are sometimes used; these are stated subsequently.

The Purchase Requisition

The purchase requisition is the form on which is initiated the request for the purchase of materials or supplies. It originates outside of the purchasing department. The requisition for raw materials and supplies should be made from the stores records. The requisition for equipment or for extraordinary materials originates with the department requiring the equipment, or for extraordinary materials originates with the department requiring the equipment or materials. The essentials of a purchase requisition are shown by Illustration No. 155.



TENNESSEE COPPER & CHEMICAL CORPORATION

Requisition No. 1350 Lockland, Ohio, Sept. 19, 1927

Mr. Pettett

Please secure the following materials which will be required by Sept. 26, 1927.

Delivery should be made by truck.

QUANTITY	ARTICLES	JOB. NO
6	doz #47 W. H. Brooms	
4	" 36" Hammer Handles	
4	kegs 20 d Nails	
2	" 10 d Nails	

Approved L. J. P. Signed W. J. Sims

Illustration No. 155, Purchase Requisition

The Purchase Order

Regardless of the nature of the purchasing organization or of the kinds of goods that are to be purchased, there must always

be issued some sort of a purchase order from the purchaser to the one from whom the goods are purchased. There are some points in the design and use of the purchase order of importance to accountants; namely:

(1) Instructions and conditions;
(2) Number of copies and distribution thereof; and
(3) Use of purchase order by purchasing department.

There is a great variety of instructions and conditions which may be placed on the purchase order. The most important of the instructions which may be found on it are the following:

(a) "Ship via..................
(b) Invoices must be rendered in duplicate.
(c) Mail bill of lading with invoice.
(d) 'Our' order number must appear on all invoices.
(e) Acknowledge receipt of order and specify delivery date."

PURCHASE ORDER

TENNESSEE COPPER & CHEMICAL CORPORATION

(CINCINNATI DIVISION)

Order No. 1500 *Lockland, O.* Sept. 22, 1927

To Queen City Supply Co.
Pearl and Elm Sts.
Cincinnati, Ohio

Please deliver this company the following materials { *Freight* / *Express* / *Truck* X }

and charge to our account, sending original Bill Lading and Invoice in Duplicate.

6 doz.	#47 W. H. Brooms	@	$9.00
4 "	36" Hammer Handles	@	$3.00
4 kegs	20d Nails	@	$3.30
2 "	10d Nails	@	$3.80

TENNESSEE COPPER & CHEMICAL CORPORATION

By L. J. Pettett

LJP-R
WJS-1350

(See that the above order number is shown on your invoice.)

ORIGINAL

Illustration No. 156, Purchase Order

Some of the conditions which may appear on the order are:

"(a) Materials are purchased subject to inspection.
(b) Goods in excess of quantities ordered will be returned at vendor's expense.
(c) Packing and carting charges will not be allowed.
(d) Right to cancel is reserved if order is not filled within a reasonable length of time.
(e) Seller guarantees that sale or use of articles will not infringe any United States patent."

The conditions may appear on the face of the order or they may appear on the reverse side. In the latter case, it is customary to have on the face a statement to the following effect:

> "By acceptance, seller agrees to all conditions specified on the face and back of this order."

The purpose of this statement is to insure that the conditions will be brought to the attention of the vendor.

The practice with reference to the number of copies to be made is not uniform. In most cases at least three copies are made. The original copy goes to the vendor, one copy is retained by the purchasing department, and one copy is sent to the receiving department. The latter copy is used in checking up the goods when they are received. Often a fourth copy is sent to the department which has made the requisition and serves as a notice that the requisition has been honored. Often two copies are retained by the purchasing department and one copy filed under the name of the vendor and the other filed under the date of delivery.

The purchasing department usually uses its copy as a means of follow-up. This copy may be ruled differently from the other copies so that certain information can be entered on it. Some of the information which may be entered on this copy is: date acknowledged by vendor, date of shipment promised, quantity received, amount canceled, balance due, and letters written.

The advantage of having all information in one place is apparent. Sometimes this information is entered on the back of the copy of the purchase order instead of on its face.

When the goods called for by the purchase order have been received or the order canceled, the copy of the order will be removed from the "unfilled order" file and placed in the "filled order" file. The advantages of maintaining a file of unfilled orders classified by date of delivery will be explained in a subsequent paragraph in this chapter. A simple form of a purchase order is shown in Illustration No. 156.

The Purchase Invoice

The student is familiar with the form and content of the purchase invoice. A typical form is shown in Illustration No. 46, Volume I. The present discussion will be confined to the procedure involved in the handling of the purchase invoice.

Purchase invoices should pass from the incoming mail clerk's desk directly to the purchasing department. Some method must be employed to show the compliance with each step in the routine of verification and entry of the invoice. Sometimes this is indicated on the back of the invoice by the use of a rubber stamp. Sometimes a printed form is attached to the invoice and each approval is entered on this form. The routine of handling the invoice should include the following:

(1) *By the purchasing department*

- (a) Verifying date of invoice.
- (b) Checking invoice with purchase order.
- (c) Verifying price and terms.
- (d) Approval of invoice by purchasing agent.

(2) *By the traffic department*

- (a) Verifying transportation charges or allowances.

(3) *By the accounting department*

- (a) Checking invoice with the receiving report.
- (b) Verifying calculations on invoice.
- (d) Designating, by symbol, account to be charged.
- (e) Posting invoice to purchase record.

In some cases the account to be charged is indicated by the purchasing department before the invoice is sent to the accounting department.

Other Purchase Forms

Forms used by the purchasing department other than those discussed in the foregoing paragraphs are:

(1) Request for quotation.
(2) Quotation record.
(3) Record of purchases from different vendors.
(4) Catalog index.
(5) Index of vendors (according to kinds of business to indicate sources of supplies).

These forms will not be discussed in this chapter, for they do not bear a direct and close relation to accounting procedure or accounting records.

Purchase Records

The most important information needed to exercise control over purchases and the purchase procedure is obtained from records of three kinds:

(1) The record of original entry for purchase invoices.
(2) The accounts or statistical records which provide a classification of the purchases made.
(3) The unfilled order records or files.

The student is familiar with the method of making the original entry for the purchase invoices. These entries are made in the purchase journal or the voucher register, the form and use of which have been discussed and illustrated in previous chapters. It is necessary to explain briefly the method of classifying purchases and unfilled orders.

Classification of Purchases

Purchases may be classified in various ways, but the classifications of most value are:

(1) By commodities.
(2) By departments or units of responsibility.
(3) By terms of credit.
(4) By vendors.
(5) By buyers.

If a commodity analysis of sales is made, it is desirable to have a commodity analysis of purchases that gross profit by commodities may be obtained. A commodity analysis of purchases is also of value in planning inventory control, since *minimum quantities* and *quantities to order* can be worked out for each commodity.

In a business where there is any attempt toward departmental organization and control, both sales and purchases are usually classified according to the units of organization. If expenses can be classified in the same manner, the efficiency of the department managers can be judged in terms of profit and loss. For example, in a department store the departmental managers are held responsible for the operations of their departments, and the sales and purchases are analyzed by departments so that departmental profit and loss can be determined. In a business with branches, the responsibility for the management of each branch is placed on the branch manager, and, in order to ascertain his efficiency, an analysis of purchases, sales and expenses by branches is necessary.

In planning the disbursements for purchases, it is necessary for the treasurer to consider the terms on which the purchases will be made. If he knows the terms on which purchases have been made during past periods, it will assist him in making an estimate of the terms of future purchases. It may be desirable, therefore, to maintain an analysis of purchases by terms.

The purchasing agent finds it of value in making contracts with vendors to know the amount of previous purchases from them. This may enable him to obtain better terms or conditions and to carry on his negotiations more satisfactorily. For this purpose a statistical record of purchases by vendors is often maintained by the purchasing department or by the accounting department for the benefit of the purchasing department.

Sometimes it is desirable to know the quantity of purchases made by different buyers and the purchase invoices are analyzed accordingly. Such an analysis may be of value in assigning quotas to buyers and keeping a check on the amount purchased by different buyers or judging the wisdom of continuing the services of particular buyers.

The student will understand that very rarely any business will maintain all the classifications explained in the foregoing. Each business will maintain the one or more classifications which are necessary to meet its problems.

Method of Showing Classification of Purchases

In each business there is one classification of purchases which is deemed of most significance, and this classification is set up in the ledger accounts. If other classifications are desired, they are maintained in supplementary records. The purchasing agent may keep a card record with vendors and enter in this record the purchases made from each vendor. The treasurer may have all invoices pass through his department and have an abstract prepared showing purchases by terms of purchase. Other classifications may be maintained by interested parties. If more than one department maintains such a classification, care must be exercised to avoid duplication. Often centralization of such records promotes economy.

Classification of Unfilled Orders

Information of much value can be obtained from the unfilled purchase orders if a proper record of them is maintained. The unfilled orders may be classified to show any or all of the following:

(1) Month of delivery.
(2) Contract orders.
(3) Orders subject to cancellation.

It should be apparent that it is quite important to know the month of delivery of the goods for which orders are outstanding. Without this information it is impossible to ascertain the proper delivery dates of goods still to be ordered. If orders are outstanding for goods to be delivered three months hence, this can have no effect on purchases necessary to satisfy the needs of the current month. It has an important bearing, however, on the placing of additional orders to be delivered in three months. The time of delivery is also of value to the financial executive in arranging for the payment of the goods delivered and to the operating superintendent in planning to store and handle them.

Sometimes firms make contracts to cover their needs for some materials or goods for a certain period of time with an agreement to require deliveries as needed. For example, a printing company may make a contract with a paper mill to supply the paper required for one year with an agreement to take a certain minimum and to receive deliveries within certain limits each month. It is important in planning future deliveries to know the amount of the orders issued and to be issued under such contracts and the extent to which deliveries under such contracts are subject to shifting. It may be desirable to speed up deliveries or to delay them, depending upon the extent to which the sales program may exceed or fail to reach the estimated program.

In some cases purchase orders are issued subject to cancellation under certain conditions and with proper notice. If such orders are outstanding, it is desirable to have their amount available that the possible reduction or change in the purchasing program may be the more readily determined.

The purchase orders outstanding may be recorded in a columnar record which provides for the classifications desired, or they may be filed in such a way as to show the classification. For example, a copy of the purchase order may be filed under the date of delivery, and at any time the total to be delivered on a particular date can be ascertained by obtaining the total of the file for that date. The form of the record is immaterial if it provides the information desired in proper form.

Methods of Ascertaining the Amount of Inventory

Under all the methods of purchasing control, it is necessary to obtain the amount of the inventory at frequent intervals. Inventory statistics are necessary both in preparing merchandise plans and in controlling the plans made. They are also necessary for preparing the periodic financial statements, such as the Balance Sheet and Statement of Profit and Loss.

These statistics may be obtained by the use of one of the following:

(a) Perpetual inventories
(b) Estimated inventories
(c) Physical inventories
(d) "Retail" inventories

Perpetual Inventories

A perpetual inventory requires the maintenance of a record with each article of goods carried in stock which will show the number of units purchased, the number sold or consumed, and the number on hand. Such records have come to be known as perpetual inventory records, stock records, stock ledgers, or balance of stores. The simplest form of a perpetual inventory record is shown in Illustration No. 157.

INVENTORY RECORD

ITEM Combination Pliers, 6-inch

Date	Received	Sold	Balance	Date	Received	Sold	Balance
1927							
3/1			15,000				
3/7		5,000	10,000				
3/19		3,500	6,500				
3/23		1,000	5,500				
4/1	9,500		15,000				

Illustration No. 157, Simple Form of Perpetual Inventory Record

This record provides columns for showing: (a) "Date"—in this column is recorded the date of each entry on the record; (b) "Received"—in this column is recorded the amount of the goods received into stock; (c) "Sold"—in this column is recorded the amount of goods sold; (d) "Balance"—in this column is recorded the amount of goods on hand, which is obtained by

subtracting the goods sold from the beginning balance and adding the receipts. This form of record will show the amount on hand at any particular time; this is why it is termed a *perpetual* inventory record.

The inventory record may be kept in quantities only, in terms of value only, or in terms of both quantities and value. The terms in which it is kept will depend on the nature of the product and the nature of the information desired from the inventory records.

Perpetual inventory records are very useful for some lines of merchandise, but they are not practical for other lines. For example, they can be used by a department store for its household utilities and shoe departments, but they can not be used satisfactorily for its millinery or ladies' ready-to-wear departments. In the first-named departments, there are several units of a standard article on hand at all times and those sold are replaced by identical articles. Of course, some articles will be dropped and other articles added from time to time. This is especially true in the case of high-priced shoes, which are more susceptible to style changes than the low-priced brands. In the last named departments, each article on hand may be different from each other article and when an article is sold it will probably not be replaced by an identical article.

When perpetual inventory records can be used satisfactorily, the problem of controlling inventory is usually simplified. *Minimum* and *quantity to order* can be worked out and entered on these records. When the record shows that the inventory has fallen to the minimum, a request is made for the quantity to order. By this method the control of inventory becomes largely a matter of routine procedure.

Estimated Inventories

Many merchants who desire frequent inventories use estimated inventories for those lines of merchandise where it is not practical to use perpetual inventories. The estimated inventory is checked by a physical inventory once or twice a year. The estimated inventory is based on the formula that the actual inventory at the beginning of the period, plus purchases for the period, minus the estimated gross profit subtracted from the sales, equals the ending inventory. The method of arriving at this formula is seen easily by considering the trading section of the Statement of Profit and Loss.

The trading section of the Statement of Profit and Loss of the Brown Mercantile Company for the month of December is shown below. From the statement therein, it is possible to prepare the following equation: Sales minus Beginning Inventory minus Purchases plus Ending Inventory equals Gross Profit.

THE BROWN MERCANTILE COMPANY

STATEMENT OF PROFIT AND LOSS FOR MONTH ENDED DECEMBER 31, 192. .

Sales		75,000
Inventory December 1	25,000	
Purchases for month	44,000	
Total merchandise to account for	69,000	
Inventory December 31	16,500	
Cost of goods sold		52,500
Gross profit on sales		22,500

Ordinarily when a Statement of Profit and Loss is made, the only unknown quantity is the gross profit and it is obtained by this equation. When it is desired to use this formula for estimating the ending inventory, there are two unknown quantities: the ending inventory and the gross profit. One of these must be ascertained before the equation can be solved. This is accomplished by estimating the gross profit. To do this the ratio to sales of the average gross profit during the past periods is determined, and this percentage is applied to the sales of the current period to obtain the estimated gross profit for this period.

To illustrate, it is found that the average gross profit of the Brown Mercantile Company during the past three years has been thirty per cent of sales. It is thought that the average gross profit of these years is indicative of the profit of the month of December of the current year. By taking this percentage of the sales for this month, the estimated gross profit is calculated to be $22,500. By using this figure the equation given above can be stated as follows: $75,000 minus $25,000 minus $44,000 plus Ending Inventory equals $22,500. By transposition and solving, the Ending Inventory is determined to be $16,500.00. Since the gross profits on different lines of goods vary, it is necessary to perform this calculation for each line of goods if an accurate estimated inventory is to be obtained.

It should be evident that estimated inventories can be only approximately correct. If the merchandise manager has before him only estimated inventories at the close of each month or fiscal period, he must use his judgment in basing his actions on them. In any case frequent tests should be made to verify the accuracy of the estimate. Estimated inventories are of value not only in controlling the amount of purchases, but may also be used in preparing monthly Statements of Profit and Loss which will serve to indicate the profit trend. These statements must, of course, be used with judgment since they are based on estimates.

Physical Inventories

Physical inventories consist in taking an actual count of the goods on hand and the ascertainment of their value on the basis established for inventory valuation. Some firms rely on physical inventories entirely, and all firms use them to some extent. Even though perpetual or estimated inventories are used, they should be checked periodically by a physical inventory. It is almost impossible to maintain a perpetual inventory free from errors, and estimated inventories can usually be only approximately correct.

Some department stores take an inventory in some departments of the store every two weeks. Such a check-up at frequent intervals is especially desirable in the case of variety goods where fashion and styles play an important part. Practically all firms which maintain an accounting system take a physical inventory yearly, and there is some tendency toward semi-annual and quarterly inventories. It has been found that if a standardized procedure for the taking of inventories is properly worked out, it is not so great a task as it was formerly thought to be.

Retail Inventories

Retail firms have developed a method of taking inventory which is known as the retail method of inventory. The essence of this method can be stated briefly. A physical inventory is taken at sales price. The percentage of average mark-down is subtracted from the percentage of average mark-up and the resulting percentage applied to the inventory at sales price to obtain the average gross profit. The average gross profit, as thus ascertained, is subtracted from the inventory at sales price to obtain the final inventory at cost. For example, the average mark-up on article X is 35 per cent and the average mark-down is 5 per cent, leaving a difference of 30 per cent. The inventory of article X at sales price is $30,000.00. The estimated gross profit on article X, then, is $9,000.00 and its inventory value is $21,000.00.

This method of inventory valuation is permitted for income tax purposes under present regulations. It is claimed that it is more convenient for retail stores than valuing inventories at cost or market, whichever is the lower. It is also claimed that it is the easiest way to show the effect of falling prices on the inventory, and is a conservative method of valuation since it automatically gives effect to all mark-downs made on goods either because of falling prices or excess or improper buying. It should be noticed, however, that if a firm follows the policy of marking up its sales price on all goods in stock as purchasing prices increase, this method will also result in taking these increases into the inventory. To do this is questionable to say the least.

Purchase Reports

It is not customary to make many reports which present information with reference to purchases only. Purchases constitute the major item of the cost of goods sold. Consequently all reports dealing with profits must take purchases into consideration whether or not they are shown as a separate item on the report. This is true in preparing the Statement of Profit and Loss and in preparing reports showing gross profits on sales and net profit on operations, such as were discussed in the chapters on sales records and reports. The report on gross profits is of as much value to the purchasing department as to the sales department, since the price at which the goods are purchased is a controlling factor in determining the gross profit. The selling price of the article may be determined by adding a certain percentage to the cost price, known as the "mark up," or in may be determined by the competition of other businesses in the same line. Unless the business has a monopoly on the goods sold, competition is likely to be an important factor in determining the amount of the "mark up". If the selling price is made too high, competitors will secure the sales which the business might otherwise obtain. Even if a business has a monopoly, it is not wise to make the price exorbitant, for this will cause customers to refrain from purchasing. In any case the cost of purchases is a controlling factor in determining gross profit.

In a business selling several lines of product, a report on gross profits may be made in the form of Illustration No. 158.

REPORT ON GROSS PROFITS

Commodity	This Month	Estimated This Month	Per Cent Inc. or Dec.	Last Month	Per Cent Inc. or Dec.	Same Month Last Year	Per Cent Inc. or Dec.	Ratio to Sales For This Year	Ratio of Est. Profit to Est. Sales This Year	Ratio of Gross Profit to Sales Last Year
....	......	......	.....	......	.....	......	.....	.....	.....	.....
....	......	......	.....	......	.....	......	.....	.....	.....	.....
....	......	......	.....	......	.....	......	.....	.....	.....	.....
....	......	......	.....	......	.....	......	.....	.....	.....	.....
....	......	......	.....	......	.....	......	.....	.....	.....	.....
....	......	......	.....	......	.....	......	.....	.....	.....	.....
....	......	......	.....	......	.....	......	.....	.....	.....	.....
Totals	......	......	.....	......	.....	......	.....	.....	.....	.....

Illustration No. 158, Report on Gross Profits

In addition to gross profits, the purchasing department exercises control over buying expenses and inventories. It is desirable, therefore, to have reports which will make possible effective

control of each of these. A report on buying expense may be made as shown in Illustration No. 159.

REPORT ON BUYING EXPENSE										
Lines of Merchandise	This Month	Estimated This Month	Per Cent Inc. or Dec.	Last Month	Per Cent Inc. or Dec.	Same Month Last Year	Per Cent Inc. or Dec.	To Date This Year	To Date Last Year	Per Cent Inc. or Dec.
Totals										

Illustration No. 159, Report on Buying Expense

Illustration No. 159 assumes that the buying expense is to be allocated to lines of merchandise. In some businesses this is not feasible. In such cases a monthly report may be made in the same form as Illustration No. 159, except the first column will show a classification of buying expenses instead of "Lines of Merchandise." If a business does not estimate its expense in advance, the third and fourth columns will be eliminated. Although most businesses do not prepare such estimates at present, the practice of doing so is rapidly increasing.

A report on inventories which will serve the needs of the purchasing department can be made in the form shown in Illustration No. 160.

REPORT ON INVENTORIES										
Lines of Merchandise	Inventory This Month	Inventory Last Month	Per Cent Inc. or Dec.	Inventory Same Month Last Year	Per Cent Inc. or Dec.	Average Inventory This Year to Date	Average Inventory Last Year to Date	Per Cent Inc. or Dec.	Turnover This Quarter	Turnover Same Quarter Last Year
Totals										

Illustration No. 160, Report on Inventories

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain and illustrate the difference in the purchases of a manufacturing business and those of a retail department store.

— 2 —

What is the distinguishing difference between finished goods and raw materials?

— 3 —

The purchasing agent of the X Company receives three purchase requisitions. The first calls for the purchasing of raw materials; the second, for the purchasing of machinery and equipment to be used in manufacturing; and the third, for furniture to be used in the office of the sales manager. Explain the origin of each of these requisitions.

— 4 —

Explain the use by the purchasing department of the copy of the purchase order which it retains.

— 5 —

A purchase invoice is received at the mail clerk's desk of the Jones Mercantile Company. Trace this invoice from this time until it is permanently filed.

— 6 —

You are requested to examine the purchase records, procedure, and routine of the X Manufacturing Company. You find that their purchase records are inadequate, and decide to recommend the installation of a voucher register. The accounting department is unfamiliar with the operation of this register. State the instructions you would give with reference to its operation.

— 7 —

"The purchasing agent finds it of value in making contracts with vendors to know the amount of previous purchases from them." Explain how this information may be obtained by him.

— 8 —

For what purpose is it desirable to maintain a classification of purchases by terms? How may this classification be shown?

— 9 —

(a) Explain and illustrate why it is important to estimate the purchases to be made. (b) What information is necessary as a basis for the preparation of such an estimate?

— 10 —

Explain the value to the purchasing department of a report showing gross profits by lines of merchandise.

— 11 —

Explain the information which the purchasing department should obtain monthly with reference to inventories. Explain the value of this information to the department.

— 12 —

Outline a procedure to be followed by the stock record clerk for keeping a perpetual inventory record ruled as in Illustration No. 157. Name the voucher which supports each entry.

— 13 —

The perpetual inventory record of the George Branham Hardware Company shows a balance of item X on hand of 3,180 pieces. By actual count, only 3,125 pieces are on hand. Name some probable causes for this discrepancy, and state how you would adjust the records.

— 14 —

The Freeman Music Company keeps perpetual inventory records for classical music and teachers' supplies, but not for popular music. Do you see any reason for this difference?

— 15 —

The Crawford Mercantile Company uses "estimated" inventories in its cutlery department. During November, cutlery sales amounted to $1,000.00, the beginning inventory was $1,500.00, purchases $500.00, and the average gross profit 40% of sales. What is the amount of the estimated ending inventory?

— 16 —

The actual cutlery inventory November 30 was $1,200.00 instead of the estimated amount. What would be the effect on the Statement of Profit and Loss prepared November 30?

— 17 —

Describe the method of taking a "retail" inventory. Name some businesses in which this method would be used. State an objection to its use.

LABORATORY MATERIAL

Exercise No. 236

You have been employed by the S. S. Pierce Grocery Company to make a detailed study of its organization and accounting methods. Upon an examination of its purchase records, procedure and routine, you decide that:

1. Purchases should be classified:
   (a) By departments.
   (b) By terms of credit.
   (c) By buyers.

2. Monthly reports should be made to the merchandise manager and the departmental buyers showing the following:
   (a) Gross profits by lines of merchandise.
   (b) Buying expense by departments.
   (c) Inventory classified by lines of merchandise.

INSTRUCTIONS: Write a report addressed to the president of the company explaining the need for and purpose of each of the changes stated above.

Exercise No. 237

The Trial Balance of H. M. Jones on December 31, 19.., is as follows:

H. M. JONES

TRIAL BALANCE, DECEMBER 31, 19..

Cash	11,000	
Bills Receivable	1,300	
Accounts Receivable	2,500	
Merchandise	3,300	
Furniture and Fixtures	200	
Real Estate	7,000	
Bills Payable		2,700
Accounts Payable		4,500
Shipment No. 1	302	330
Shipment No. 2	520	480
Shipment No. 3	2,000	
Expense	550	
Merchandise Discount	130	220
Discount	30	80
Interest	5	25
H. M. Jones, Proprietor		20,502
	28,837	28,837

Investigation of the accounting records and supporting data discloses the following:

1. A fire which occurred on December 20 resulted in the destruction of all the merchandise, the furniture and fixtures, and the building. The accounting records were saved by being in a safe. This safe is so badly damaged by the fire that it is not thought to be of any salable value. The lot on which the building stood is estimated to be worth $6,000.00.

2. The merchandise represented by Shipments Nos. 1 and 2 has all been sold and final accounting made therefor. No returns have been received from Shipment No. 3; it is valued at cost as shown in the Trial Balance. The term "shipment" here refers to merchandise which the owner has sent out to be sold on his account and risk. "Consignment Out" may also be used as the name of an account of this nature.

3. An analysis of the Merchandise account shows the following:

Inventory, December 1	$ 4,000.00
Purchases for December	15,760.00
Freight and Cartage In	390.00
Sales to time of fire	11,150.00
Insurance received on stock lost by fire	3,000.00
Cost of goods destroyed by fire	8,000.00
Cost of goods shipped to commission merchants	2,700.00

The Merchandise account was credited with the cost of goods shipped to commission merchants and with cash received from the insurance company. You deem it desirable to set up a Fire Loss account which will be debited with the cost of goods destroyed and credited with the returns from insurance. This account will also be debited with the book value of all other assets destroyed and credited with returns from insurance. The balance will be transferred to Profit and Loss.

4. An analysis of the Real Estate account shows a debit for cost of $12,000.00 and a credit for insurance of $5,000.00. The cost of the building should be transferred to the Fire Loss account and this account credited with the returns from insurance.

INSTRUCTIONS: 1. Make adjusting entries necessary:

(a) To close the Merchandise account and open accounts with the following: Inventory, Purchases, Sales, Freight and Cartage In, Fire Loss;

(b) To adjust the account with Real Estate;

(c) To close Furniture and Fixtures into the Fire Loss account.

2. Prepare a Balance Sheet.
3. Prepare a Statement of Profit and Loss.
4. Make the closing entries.

Exercise No. 238

The Trial Balance of H. B. Smith on June 30, 19.., is as follows:

H. B. SMITH

TRIAL BALANCE, JUNE 30, 19....

Cash	3,400	
Notes Receivable	1,250	
Accounts Receivable	4,500	
Merchandise Inventory	3,600	
Delivery Equipment	3,000	
Furniture and Fixtures	1,000	
Buildings	15,000	
Land	3,000	
Notes Payable		2,000
Accounts Payable		5,000
Res. for Dep. of Building		3,000
Res. for Dep. of Del. Equip.		600
Res. for Dep. of Furniture and Fixtures		200
Reserve for Loss on Bad Debts		120
H. B. Smith, Capital		9,515
Sales	450	20,000
Purchases	1,200	250
Freight In	400	
Selling Expense	1,800	
General Expense	1,200	
Delivery Expense	800	
Insurance Prepaid	125	
Interest	90	130
	40,815	40,815

An examination of the records and supplementary data discloses the following:

1. Merchandise inventory, June 30, $3,000.00.

2. Yearly allowance for depreciation:
   On building, 5% of cost.
   On delivery equipment, 20% of cost.
   On furniture and fixtures, 10% of cost.
   The depreciation on building and furniture and fixtures is to be charged to General Expense. The depreciation on delivery equipment is to be divided equally between Freight In and Delivery Expense.

3. Estimated loss on bad debts, 1% of sales for the year.
4. Accrued interest on notes payable, $30.00.
5. Insurance expired, $65.00
   This will be charged to General Expense.
6. Supplies on hand, $34.00.
   These supplies when purchased were charged to General Expense.

INSTRUCTIONS: 1. Make the adjusting entries.

2. Prepare a Balance Sheet.

3. Prepare a Statement of Profit and Loss.

4. Compute (1) turnover for the period; (2) the ratio of gross profit to sales; (3) the ratio of operating expenses to sales; (4) the ratio of net profit to sales; (5) the ratio of net profit to the average invested capital for the period.

CHAPTER LXV

COST ACCOUNTING

Meaning of Cost Accounting

In a manufacturing business, the goods sold are usually produced by the company. This necessitates that raw materials be purchased and with the aid of labor and equipment be converted into the finished goods the company offers to its customers. To provide a proper control of the purchases of materials, labor and equipment and the proper use of these after they are purchased, it is necessary to have accurate records of (a) the expenditures made for these purchases and (b) the results obtained from the manufacturing operations. The process by which such records are maintained and used is called *cost accounting.*

Relation of Cost Accounting to Management

Cost accounting is an aid to management in accomplishing the following:

1. The establishing and maintaining of proper sales prices.
2. The determination of production efficiency.
3. The proper statement of Balance Sheet values and operating results.
4. The control of future expenditures and the planning of future operations.

It is sometimes said that the cost of goods manufactured is the major factor in fixing the sales price. This statement is based on the assumption that the sales price is arrived at by adding the cost to sell the product plus the desired profit to the manufacturing cost. In most cases, however, the fixing of the sales price is not so simple as this method indicates. Sales prices in most lines of business are not the result of the costs of any one manufacturer but are the result of the competition between all manufacturers within a locality. If one manufacturer has a decided advantage in the production or sale of goods over another manufacturer, it is quite obvious that he may be able to undersell his competitor with the result that his competitor will not make a satisfactory margin of profit.

Cost accounting is, however, a very definite aid in the establishment and maintaining of sales prices. If the cost of goods manufactured is not known, it is impossible to know what a fair sales price would be and if the cost is known and the margin of profit is low, it gives opportunity to the management to change the design of the product if necessary, or to attempt to reduce its production cost. A knowledge of the cost also gives the management facts upon which it can decide whether or not a reduction in the sales price is advantageous or whether or not an attempt should be made to sell at a higher price against competition.

The cost accounting reports will show the management whether the efficiency of the plant is increasing or decreasing, as shown by the increasing or decreasing unit costs. It thereby aids in placing a definite responsibility for the efficient production of the goods upon the plant management. If the company has more than one plant manufacturing the same product, it gives a comparison of the relative efficiency of the different plants.

In many industries there is a trade association to which the majority of the members of the industry belong. These associations often receive cost information of the various companies and compile reports showing the costs of the various members. The cost accounting systems of the members will in this way enable the manufacturers to determine their relative efficiency in manufacturing within the industry.

We have seen in Chapters LVII and LVIII that cost data are necessary for the preparation of an accurate Balance Sheet and Statement of Profit and Loss for a manufacturing business. Without such a system it is impossible to ascertain the profit or loss made without taking a physical inventory, and it is very difficult to arrive at the value of such an inventory if cost data are not available.

The compilation of cost data gives the management facts upon which to base estimates for the future planning of its production. By the use of accurate data on past costs, it can ascertain the lines of products it should seek to sell in large quantities and the lines it should discontinue or sell in as small quantities as possible. After the quantity of goods to be produced has been ascertained, cost information is necessary to ascertain the cash required to finance the manufacturing program. Such data are essential for accurate planning of all the manufacturing activities.

Inventory Records

The manufacturing process begins as the result of the decision of the management that additional goods are needed to meet

sales demands. The factors which should be considered in arriving at this conclusion will vary to a considerable degree in different companies and even in the same company with reference to different products.

In a small manufacturing business, where it is possible for the owner or manager to supervise actively all departments of the business, a decision that a specific product should be manufactured may rest upon the following considerations:

1. The manager knows from past records that sales of Item A are approximately 6,000 pieces a year.
2. The finished product in reasonable quantities can be produced in sixty days after the factory is directed to commence production.
3. By looking over the finished stock the manager estimates there are now approximately 1,000 pieces available for sale.
4. If the sales average about 1,000 pieces every sixty days (annual sales, 6,000), and if it takes about sixty days to produce a lot of 1,000, then since there are now approximately 1,000 pieces available, production should be started on 1,000 more because by the time the new lot is produced the 1,000 pieces now available will have been sold.

Such planning is possible where a business is small and where the manager of the business has only a few important problems with which to deal. In a large business which manufactures several hundreds or even thousands of items, it is impossible for the production manager, much less the general manager, to remember all the information necessary for a decision to manufacture a certain product. Consequently it is necessary to have records which provide information on which the manufacturing operations can be based. Such records have come to be known as perpetual inventory records, stock records, stock ledgers, or balance of stores. Many manufacturing firms refer to these as "balance of stores," and they will be so termed in this discussion.

The simplest form of a balance of stores record is shown in Illustration No. 161. It provides columns for showing: (a) "Date"—in this column is recorded the date of each entry on the record; (b) "Received"—in this column is recorded the amount of the goods received into stock; (c) "Sold"—in this column is recorded the amount shipped to customers on sales orders; (d) "Balance"—in this column is recorded the amount of goods on hand, which is obtained by subtracting the goods sold

from the beginning balance and adding the receipts. This form of record will show the balance on hand at any specific time.

BALANCE OF STORES

ITEM 1-inch Cast Iron Elbow: Beaded

Date	Received	Sold	Balance	Date	Received	Sold	Balance
1927 4/1			12,500				
4/5		4,000	8,500				
4/15		1,000	7,500				
4/20		4,000	3,500				
4/30		1,000	2,500				
5/2	10,000		12,500				

Illustration No. 161, Simple Form of Balance of Stores Record

But in planning production it is necessary to know not only what is on hand, but also how soon this will be sold. It takes a certain period of time to manufacture goods after the production department is directed to manufacture them. Consequently it is necessary to know when additional goods will be needed a sufficient length of time in advance to make it possible for the production department to manufacture them by the time they are needed. As indicated by the discussion on page 989, this necessitates that an estimate be made of the probable sales during the length of a production period. From the "Sold" column in Illustration No. 161, the sales during past periods can be ascertained. Considering the past sales in the light of business conditions under which the sales were made and the probable business conditions in the future, an estimate of future sales can be made. With this information available, the same calculations can be made as were suggested on page 989, where the business is small and production is regulated without the aid of inventory records.

Although the simple form of balance of stores record shown in Illustration No. 161 is satisfactory in some cases, it is usually found that information in addition to that provided by this

record is necessary to plan production. As an illustration of the need of additional information it may be assumed that J. H. Brown orders 4,000 pieces of Commodity A, 3,000 pieces of Commodity B, and 2,000 pieces of Commodity C. By an inspection of the stock records, it is found that there are now on hand 1,000 pieces of Commodity A, 5,000 pieces of Commodity B, and 4000, pieces of Commodity C. It will be three weeks before additional pieces of Commodity A are received from the factory. It may be impracticable because of freight charges or other reasons to ship B and C now and A later. Therefore, shipment of B and C is delayed until A becomes available. Under these conditions there should be some method of indicating on the inventory records that 3,000 pieces of Commodity B and 2,000 pieces of Commodity C are sold, although they are still in stock. If this is not done, these items which are now in stock may be shipped to other customers and when A becomes available, either B or C, or both, may not be in stock, thereby delaying shipment to the customer who has the first right to these goods by reason of the prior receipt of his order.

Again, if the order of Brown calls for 4,000 pieces of Commodity A and only 1,000 are on hand at the time the order is received, it should be shown on the inventory record that there is now a shortage of 3,000 pieces so that production can be started on a sufficient number of pieces to make up this shortage and leave an inventory of the size it is desired to carry. Unless the inventory records are designed to show the receipt of the order from Brown, the shortage it produces in Commodity A will not be shown, and by the time goods are produced to fill Brown's order, other orders will have been received which may cause the shortage to continue indefinitely.

To eliminate this difficulty, inventory records have been devised which provide for a "Reserve" or "Applied" column where entry of the customer's order is made immediately upon its receipt. This form of balance of stores record is shown in Illustration No. 162.

To familiarize the student with this type of balance of stores record, the entries appearing thereon will be explained in detail. Suppose that on the day the balance of stores record is opened, April 1, a physical inventory shows there are 12,500 pieces in the stock-house bin. This quantity is entered in the fourth or "Balance" column. After looking through the files of customers' orders, it is found that all orders for this particular commodity have been filled so that the quantity of 12,500 is available for sale. This quantity would be entered therefore in the "Available or Shortage" column. On April 5 an order is received for 4,000 pieces, and this order is assigned the number E6784. The number 4,000 is entered in the "Applied" column and subtracted from

BALANCE OF STORES

ITEM 1-inch Cast Iron Elbow Beaded

Date	Received	Issued	Balance	Applied	Available or Shortage
1927					
4/1			12,500		12,500
4/5				4,000	8,500
4/9		4,000	8,500		
4/15				1,000	7,500
4/20				4,000	3,500
4/25		1,000	7,500		
4/26		4,000	3,500		
4/30				1,000	2,500
5/2	10,000		13,500		12,500
5/2		1,000	12,500		

Illustration No. 162, Balance of Stores Record with "Applied" Column

the amount in the "Available or Shortage" column, thereby reducing the balance in that column to 8,500. On April 9 the quantity specified on order E6784 is shipped and an entry is made in the "Issued" column, reducing the "Balance" column to 8,500. The other entries for orders received, balance on hand, and quantities shipped are similar to the ones described. On May 2 10,000 pieces of stock are received from the factory. This quantity is entered in the "Received" column and added to the quantity in the "Balance" column and the "Available or Shortage" column.

The value of the "Applied" column lies in the fact that as soon as a customer's order is received, it is entered in the "Applied" column and is subtracted from the balance of the "Available or Shortage" column, which reduces the quantity available for sale and so gives notice when stock is being depleted, regardless of whether the customer's order has been shipped or not.

Although Illustration No. 162 provides additional information and consequently affords an additional control over inventory to that provided in Illustration No. 161, there is one situation for which it does not provide. Referring to the entries in Illustration No. 162, it will be seen that between April 5 and May 1 the "Available or Shortage" column shows a balance of less than 10,000 pieces. If it is assumed that 60,000 pieces of this item are sold annually and that it takes on an average sixty days from the time an order is issued to the factory to produce additional items until they are delivered into stock, when the balance available falls to 10,000 items it is desirable to order additional production, since the 10,000 on hand will all be sold by the time

BALANCE OF STORES

Ordered			Received		Issued		Date	Balance	Applied		Available or Shortage
Date	Quantity	Order No.	Quantity	Price	Quantity	Order No.			Quantity	Order No.	
1927							1927				
							4/1	12,500			12,500
4/1	10,000	672					4/5		4,000	E6784	8,500
					4,000	E6784	4/9	8,500			
							4/15		1,000	W8270	7,500
							4/20		4,000	N9274	3,500
					1,000	W8270	4/25	7,500			
					4,000	N9274	4/26	3,500			
							4/30		1,000	S4620	2,500
		672	10,000				5/2	13,500			12,500
5/2	10,000	1004			1,000	S4620	5/2	12,500			

Minimum Stock	Maximum Stock	Quantity to Order	Unit Weight	Number of Pieces Sold
12,500	22,500	10,000	.5	1924-125,000 1925-130,000 1926-128,000

ITEM	Group	Commodity
1-inch Cast Iron Elbow: Beaded	101	101006

Illustration No. 163, Balance of Stores Sheet with "Order No." Columns

the items ordered from the factory are received into stock. In this case it will be seen that, when the balance on hand fell to 8,500 in April, a new order would be issued to the factory. But the entry under date of May 1 shows that during all this time there were 10,000 pieces in process of manufacture. Obviously it was not necessary to order additional items from the factory so early since these 10,000 items were in process.

The balance of stores record, therefore, should provide a space where record can be made when a production order is entered. Illustration No. 163 shows a balance of stores record which provides such a column. In the light of the preceding discussion, this form should be understood without difficulty.

It will be noted that in Illustrations Nos. 162 and 163, the extreme right-hand column is headed "Available or Shortage." If an order is received which calls for a greater quantity than is available, the difference between the quantity available and the quantity ordered is the shortage and is entered in red ink.

Establishment of Maximum, Minimum, and Quantities to Order

The foregoing discussion has been concerned mainly with a description of the form of balance of stores record and the method of making entries thereon. The value of this record as a means of inventory control has been indicated by this discussion. In order that this control may be of greatest value, it is necessary that it be as nearly automatic as possible. To accomplish this, it is necessary that limits be established which will serve to call the attention of those working on the stores record when orders should be issued for additional production and should inform them as to the amount for which these orders should be issued. This is accomplished by establishing *maximum, minimum,* and *quantities to order.*

Maximum and minimum limits should be established on each item of goods carried in stock. The maximum states the amount above which the inventory should not be permitted to go except by special permission of a responsible executive. The minimum states the amount to which the stock of an item can be depleted before placing a production order to replenish it. When sales orders reduce the stock to the minimum, a production order should be issued for the amount decided upon as the quantity to order.

The factors to be considered by the production department in the establishing of maximum and minimum and quantities to order are given on page 995.

(1) Production period.
(2) Probable sales.
(3) Margin of safety.
(4) Economical run.

The production period is the time required from the placing of an order on the factory for production until the finished goods are delivered to the store-house. Obviously this period can not be established with exactness and will vary according to the quantity ordered, since it will take longer to produce ten thousand items than to produce one thousand items. Sufficient data can be collected, however, to estimate the approximate length of this period for different quantities of production. In the absence of better statistics, it may be necessary to use as the basis of computation the average production period as shown by the records of past production. As the planning work proceeds, it will be possible to obtain data which will serve to correct errors which may have been made in the original calculations.

The expected sales are stated in the estimate of sales prepared by the sales department. From this estimate it is easy to compute the expected sales for the production period. To illustrate: If the production period is thirty days and the quarterly sales estimate on Item Y is 600 units, the probable sales for the production period are 200.

If the probable sales and the production period could both be forecast with exactness, it would be satisfactory to establish a minimum just equal to the probable sales of the production period and to issue an order for the same amount as the minimum when the minimum is reached. To illustrate: the production period is thirty days and the probable sales for this period are 200. When the balance on hand reaches 200, the factory will be directed to produce 200 more. The factory will produce these and deliver them to stock in thirty days just as the last of the goods on hand are sold.

Experience has shown that neither probable sales nor the length of the production period can be determined with exactness. Estimated sales may be oversold; strikes, breakdowns, and delays in deliveries of raw material may interfere with the normal course of production. It becomes necessary, therefore, to have a quantity of finished goods on hand in excess of the probable sales for the production period at the time the production order is issued. This excess may be termed the *margin of safety.* This margin is usually estimated at from ten to twenty-five per cent of the probable sales for the production period. Its amount will vary in different businesses and may well vary with reference to different items in the same business.

If a business produces two or more commodities, or two or more sizes of the same commodity, it is usually possible to use the same machines to manufacture the different commodities or the different sizes. When the commodity or size of commodity on which a machine is working is changed, it is frequently necessary to "adjust" the machine. In making this adjustment, considerable time with the consequent cost may be required. This cost must be added to the cost of the articles manufactured. If the machine is used to manufacture only a few pieces at a time and the cost of adjusting the machine is added to the cost of the work on these pieces, it may make the unit cost of the work unduly high.

For example, the X Machine may be used in manufacturing Commodity Y. It costs $5.00 to change the X Machine after it has been used on Commodity Z and put it in a condition to work on Commodity Y. One hundred pieces of Commodity Y are being manufactured and the operation performed on these pieces by X Machine costs $4.00, or four cents a piece. But when the $5.00 for adjusting the machine is added, the total cost is $9.00, or nine cents a piece. If, instead of 100 pieces, 1,000 pieces are manufactured at one time, and it is assumed that the cost per piece of operating the machine is the same as for the one hundred, the total cost of machine operation plus adjusting charge will be $40.00 plus $5.00 or $45.00. This makes the total cost per piece four and one-half cents. It can be seen that the more pieces "run through" the machine at one time, the less per piece will be the cost of adjusting the machine. In planning production in a business where machines must be adjusted each time a new order goes through, it is necessary to have each order for a sufficient amount that the cost of adjusting the machines will not make the unit cost too high. The minimum amount which can be produced at a reasonable cost is termed the *economical run.* In determining upon the quantity to order, it is necessary to give careful consideration to see that it constitutes an economical run.

As previously explained, the "probable sales" for the production period are the quantity expected to be sold during that period. The margin of safety is the additional amount it is thought necessary to carry to insure against contingencies. Therefore, the quantity to which stocks can be depleted before a production order is started is the sum of the probable sales for the production period and the margin of safety. This is the minimum. When the stock of any item is reduced to this quantity, a production order is issued for the quantity to order. The product specified on the production order passes through the production process and arrives at the storeroom, ideally, when stocks have been reduced to the margin of safety.

Quantities to order must be established under two sets of conditions. These conditions and the procedure in each case are as follows:

(1) Where the probable sales for the production period plus the margin of safety is less than the amount of the economical run, the latter amount becomes the quantity to order. To illustrate: The production period for Commodity H is thirty days and the probable sales for this period is 200. The margin of safety is twenty-five per cent of the probable sales, or 50. The probable sales plus the margin of safety is 250. It has been found, however, that to produce less than 500 pieces at a time causes an excessive piece cost. The economical run, therefore, is 500, and this becomes the quantity to order. When the minimum of 250 is reached, a production order will be issued for 500.

(2) Where the amount of the probable sales for the production period plus the margin of safety is equal to or greater than the amount of the economical run, the former amount becomes the quantity to order. Under the conditions stated in the preceding paragraph, if the economical run were 200 instead of 500, then the quantity to order would be 250.

The maximum is the sum of the minimum and the quantity to order. It is the danger mark which must not be exceeded.

Enforcement of Minimum and Quantities to Order

There is a separate balance of stores card or sheet kept for each item of goods carried in stock. The maximum, minimum, and quantities to order are written on the face of the card as shown in Illustration No. 163. Each time the clerk who is responsible for maintaining the balance of stores record posts an entry, he extends the balance and compares it with the minimum. Whenever the balance falls to the minimum, the clerk makes out a slip showing the name of the item and the quantity to order. He passes this slip to the section responsible for initiating production orders, and it prepares an order directing the factory to produce the quantity to order.

Method of Controlling Inventories in Different Types of Industry

In this discussion we have assumed a manufacturing business which manufactures goods for stock in anticipation of orders. We have also assumed that goods are produced on specific orders, which results in the combination of raw materials into a finished product. In some lines of industry these conditions do not exist.

For example, in a packing company which purchases live stock, such as cattle and hogs, and produces from these various products, it is not practical to use the method of inventory control we have outlined. It is impossible to discuss all the methods of inventory-keeping which may be used. We have discussed one method in considerable detail with the thought that the student will not find it difficult to understand the modifications necessary in specific cases if he understands thoroughly the fundamentals illustrated by the discussion in this chapter.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The sales department estimates the sales for the current year to be 12,000 pieces and the production department has agreed that it can produce this amount. What further problem has the production department in planning the production for this year?

— 2 —

The National Motors Company manufactures one grade of cars. It is estimated that its sales for the year will be 20,000 cars. The president of the company suggests that the factory operations be speeded up in order that these 20,000 cars be manufactured during the first four months of the year after which the factory may be closed down for the remainder of the year. Do you think this a satisfactory procedure? Why?

— 3 —

Explain and illustrate the need for inventory records in the control of production.

— 4 —

Explain how the balance of stores records may be of value to the sales department in estimating sales.

— 5 —

The Bowen Manufacturing Company receives an order from the Blackwell Company for 2,000 pieces of Commodity A, 4,000 pieces of Commodity B, and 5,000 pieces of Commodity C. There are sufficient pieces of Commodities A and B on hand to fill the order, but there are only 2,000 pieces of Commodity C in stock. Because of the extra shipping charges involved in shipping separate small lots, it is not desirable to ship Commodity A and Commodity B at the time the order is received and Commodity C later. Therefore, it is decided to wait until additional pieces of Commodity C are received from the factory for making shipment. One week later 6,000 pieces of Commodity C are received from the factory, and it is decided to make shipment of the entire order. Upon investigation, however, it is found that shipments of A and B have been made to other customers and that there are now not sufficient pieces of Commodity A and B on hand to fill the order of the Blackwell Company. This company has frequent experiences similar to this one. Explain a means by which such conditions may be avoided.

— 6 —

Explain and illustrate the use of the "Applied" column, shown on the balance of stores record in Illustration No. 163.

— 7 —

Explain and illustrate the value of showing the *shortage* on the balance of stores record.

— 8 —

Explain and illustrate the purpose of establishing *minimum* and *quantity to order.*

— 9 —

Explain and illustrate the purpose of the *margin of safety.*

— 10 —

What is meant by an *economical run?* How is it determined?

— 11 —

The estimated yearly sales of Commodity O are 12,000 pieces. The average production period for this commodity is thirty days. The least quantity which can be manufactured economically is 500. It is thought necessary to establish a margin of safety of 25% of the probable sales. Explain what would be (a) probable sales; (b) minimum; (c) quantity to order, for this commodity.

— 12 —

Explain how the minimum and quantity to order, after they have been established, are enforced.

LABORATORY MATERIAL

Exercise No. 239

The Super-Steel Corporation decides to install balance of stores records as of May 1, 19.... The physical inventory, taken as of that date, shows that 4,000 items of Commodity X are on hand. The records show that on April 15 there were 1,500 pieces ordered from the factory on Production Order Z5. The estimated yearly sales for Commodity X are 18,000 pieces. The average production period for the company is thirty days. The margin of safety is estimated at 20% of the probable sales. An economical run for Commodity X is 800 pieces. The following transactions with reference to Commodity X take place during the month of May:

May 5. Sales Order D1000 received, 2,000 pieces.
7. Sales Order D1000 shipped.
11. Sales Order R192 received, 250 pieces.
12. Sales Order R192 shipped.
13. Production Order Z10 issued for the quantity to order.
15. Finished goods called for by Production Order Z5, received into stock, 1,500 pieces.
15. Sales Order E989 received, 750 pieces.
18. Sales Order D1200 received, 500 pieces.
20. Sales Order E989 shipped.
21. Sales Order D1200 shipped.
25. Sales Order G727 received, 1,900 pieces.

INSTRUCTIONS: 1. Draw up a form like Illustration No. 163.
2. Record the above transactions on this form.

Exercise No. 240

The Atlas Turbine Company estimates its yearly sales of Commodity Y to be 300,000 pieces. The average production period for the company is fifteen days. The margin of safety is estimated to be 10% of probable sales. An economical run for Commodity Y is 2,000 pieces. The records show that there are no unfilled sales orders at the beginning of March. A production order No. X26 for 13,750 pieces was issued on February 19. On March 1

the inventory on hand is 15,000 pieces. During March the following transactions take place:

March 1. Inventory on hand, 15,000 pieces.
1. Sales Order A771 received, 1,900 pieces.
1. Production Order X27 issued, 13,750 pieces.
5. Sales Order A771 shipped.
6. Goods called for by Production Order X27 received, 13,750 pieces.
10. Sales Order F934 received, 7,500 pieces.
11. Sales Order R2100 received, 4,250 pieces.
13. Sales Order F934 shipped.
15. Sales Order R2100 shipped.
16. Sales Order A772 received, 5,000 pieces.
16. Goods called for by Production Order X28 issued, 13,750 pieces.
17. Goods called for by Production Order X27 received.
20. Sales Order A772 shipped.
24. Sales Order R2200 received, 390 pieces.
25. Sales Order G873 received, 500 pieces.
Sales Order F944 received, 1,200 pieces.
27. Sales Order R2200 shipped.
Sales Order G873 shipped.
28. Sales Order A773 received, 1,750 pieces.
29. Sales Order F944 shipped.
29. Sales Order S100 received, 2,250 pieces.
31. Sales Order A773 shipped.

INSTRUCTIONS: 1. Draw up a form like Illustration No. 163.
2. Record the above transactions on this form.

CHAPTER LXVI

COST ACCOUNTING (Concluded)

The Planning of Production

In every manufacturing business, there must be some one who is responsible for the initiation of production orders and the control of the orders issued while they are in the process of manufacture. In some cases this function is performed by the factory superintendent or works manager. If this control is exercised in a systematic manner, it is necessary that written orders and reports be employed, and this involves the performance of considerable clerical detail. It is customary for the works manager to delegate the execution of this "paper work" to an assistant.

In a large factory this work is of sufficient importance to necessitate the organization of a department, usually termed the *planning* department, which has control of production planning and procedure. The planning department is divided into sections, and each section is in charge of one phase of production control. There is ordinarily a *factory schedule* section which is responsible for the initiation of production orders and the receipt of production reports from the factory. The head of the factory schedule section is frequently termed the *production clerk*. The work of the production clerk is closely related to the work of the accounting department. To illustrate concretely the procedure involved in the carrying on of production and the method of finding the cost of the goods produced, we will outline a definite procedure for a business of the type discussed in the preceding chapter.

The Notice of Minimum

When the balance available of any item of goods, as shown by the balance of stores records, reaches the minimum, the balance of stores clerk issues a notice to the production clerk. This notice should contain, at the least, the information shown in Illustration No. 164.

Production Order

The production clerk, upon the receipt of the notice of minimum will issue a production order. A simple form of production order is shown in Illustration No. 165.

NOTICE OF MINIMUM

Date .... Order No...............

ENTER ORDER FOR:

Quantity	Size	Description

....
Balance of Stores Section

Illustration No. 164, Notice of Minimum

PRODUCTION ORDER

Factory Order No........

To Foreman .... Dept. .... Date ....

Date Wanted	Bill of Material or Mat. Req. No.	Description	Quantity

Completed .... Signed .... Supt.

.... Foreman

Illustration No. 165, Production Order

Usually four copies of the production order are prepared: one copy goes to the foreman of the first department which is to perform work on the order; one copy is sent to the cost accounting section of the accounting department; one copy is sent to the balance of stores section; and the fourth copy is retained by the production clerk in his files. Other copies may be made if there are others who desire information with reference to orders issued.

Bill of Materials

The production clerk, or some section of the planning department, will prepare a bill of materials for each production order issued which will show the number of pieces of each kind of raw materials required to manufacture the finished goods called for by the production order. One copy of the bill of materials will be sent to the raw materials balance of stores clerk, who will enter the items called for by it in the "Applied" or "Reserve" column on the balance of stores record. This column serves the same purpose as the "Applied" column on the balance of stores for finished goods. It sets aside or holds in reserve the materials required for the production order for which the bill of materials is prepared, so that they will not be used on some other production order before they are required for this one.

The bill of materials shows the total materials required by all departments in the manufacture of the goods called for by the production order. Since the production order passes through one department at a time, it may not reach some departments until several days after it is issued, and these departments may not take the raw materials needed for the order from the storeroom until the production order reaches them. This explains why all the materials called for by the bill of materials are not removed from the storeroom as soon as the production order is issued, and this necessitates that they be *reserved* on the balance of stores record.

Balance of Stores for Raw Materials

An inventory record is maintained for raw materials in the same form as it is maintained for finished goods. Raw materials purchased are entered on these records from the invoices or from the reports of materials received. The goods issued to the factory are entered from the materials requisitions, which are received in the manner described under the next topic.

Maximum, minimum, and quantities to order are established in the same manner as for finished goods. The only difference in the procedure of operating the balance of stores records for raw materials and the balance of stores records for finished goods is that when the minimum is reached on the former record, a pur-

chase requisition is prepared and sent to the purchasing agent, while in the latter case a requisition for production in the form of a "notice of minimum" is issued to the production clerk. The reason for this difference is easily seen, since additional finished goods are obtained from the factory, while additional raw materials are obtained by purchases from outside vendors.

Materials Requisition

When the foreman of the department which is to initiate the manufacturing process receives the production order from the production clerk, he will need to secure from the storeroom the raw materials necessary for the production of the finished goods called for by the production order. He obtains these by means of a materials requisition on the storeroom. The essential information which should be contained in the materials requisition is shown in Illustration No. 166.

FARRELL MANUFACTURING CO.
Pittsburgh, Pa.

Requisition for Material
Which is in Stock

Date....................

Quantity	Size or Number	Description	Weight	STOP HERE	Price	Amount

Charge.................................... For......................

Filled From................................ Filled By................

Ent. Stock Book By............ Ext. By............ Dist. By.............

Signed......................

Illustration No. 166, Materials Requisition

The materials requisition is prepared in duplicate. The original is sent to the raw materials storeroom and the duplicate is retained by the foreman. The foreman will fill in the body of the materials requisition to show the date, quantity desired, the size or number, a description of the material desired, and, in some cases, its weight. At the bottom of the requisition he will indicate the production order which is to be charged for the material.

When the materials requisition is received by the storekeeper, he will deliver the materials called for and fill in the bottom of the requisition to show the storeroom from which the materials are issued, and the name of the issuing storekeeper. After the requisition is filled, it will be forwarded to the balance of stores clerk, who will make the proper entries on the balance of stores records to show that the goods have been taken out of stock. We shall see later that these requisitions are used by the cost accounting section of the accounting department in compiling the job cost sheets.

When there is a highly centralized planning department, the materials requisition may be filled out by this department rather than by the foreman of the department. The procedure of handling the requisition is the same in both cases, in so far as the cost records are the same.

Labor Tickets

When the foreman of the department receives the materials from the storeroom, he commences manufacturing operations on them. In the performance of these operations, it is necessary that he employ the services of workmen. For accounting purposes it is necessary that a record be kept to show the cost of these services. This is usually accomplished by having a time ticket prepared for each workman showing the amount of work he has performed on each production order.

Time tickets are made in various forms, depending on the information it is desired to obtain from them. A very simple form of time ticket is indicated by Illustration No. 167.

TIME TICKET

Name........................ Date......................

Department	Classification No.	Production Order	Description	Quantity	Time	Rate	Amount	

Illustration No. 167, Time Ticket

The modern tendency is to use tabulating machines as a means of assembling labor costs. When these machines are used, a tabulating card, such as that shown in Illustration No. 168 is employed for the recording of the employes' services. The method of using such machines will be explained in Chapters LXXII and LXXIII.

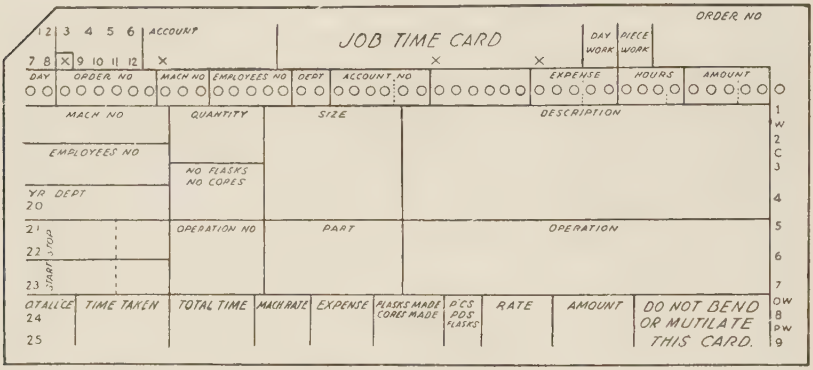


Illustration No. 168, Job Time Card

Whatever form of time ticket may be employed, it is usually prepared in duplicate; one copy is sent to the accounting department and the other is given to the workman that he may be able to check his earnings with the payment he receives at the end of the pay roll period.

Assembling of Time Tickets

The time tickets must be assembled to show three things: (1) the amount due to each workman, which is used as a basis of making up the pay roll; (2) the total amount due for labor, which is used as the basis for entries in the voucher register—this amount usually can be obtained by totaling the pay roll which shows the amount due the individual workmen; (3) the amount to be charged to each production order.

Finished Goods Report

When the goods called for by the production order are completed, they are delivered to the storeroom. Before placing the goods in stock, they are subjected to the scrutiny of an inspector to ascertain if they are in proper condition. The inspector or the stores department prepares a report showing the number of pieces delivered into stock. One copy of this report is sent to the production clerk, another copy is sent to the cost accounting section,

and a third copy is sent to the balance of stores clerk. This report notifies the cost accounting section that the production order has been completed, and this section then proceeds to determine the cost of the order in the manner described below.

Cost Accounting Records

When the cost accounting section receives a copy of the production order issued by the production clerk, an account is opened with the order in the *cost ledger*. This ledger is usually in loose-leaf form; its pages are ruled to show the information desired with reference to the cost of each order. A simple form of cost ledger is shown in Illustration No. 169.

COST SHEET

Name of Article................	Sheet No.......................
Date Finished..................	Catalog No.....................
Number Made..................	Drawing No. ....
Unit Factory Cost..............	Production Order No. ....

DATE	MATERIAL					LABOR					INDIRECT	
	Description	Req. No.	Quantity	Rate	Amount	Operation	Check No.	Hours	Rate	Amount	%	Amt.
Totals												

Illustration No. 169, Cost Ledger

It will be noticed that the cost sheet calls for a record of the cost of: (a) the materials; (b) the labor; and (c) the manufacturing expenses on each production order.

The materials requisitions received by the balance of stores clerk show the order in which the materials are to be used. After

these requisitions are entered on the balance of stores records, they may be forwarded to the cost accounting section and entries made from these on the cost sheet. In some cases the balance of stores section makes a summary of the materials requisitions and sends to the cost accounting section a report at the end of each week or month, showing the total materials of each kind issued on each production order.

The time tickets show the production on which the labor they represent has been expended. After these tickets have been entered on the pay roll by the pay roll department, they may be forwarded to the cost accounting section and used as the basis for entries in the cost ledger; or the pay roll department may make a summary of these tickets showing the amount of wages which should be charged to each production order and send a report to the cost accounting section from which it posts to the cost sheets.

Manufacturing Expense

The materials and labor used on each production order can be identified with the order by means of the materials requisitions and the time cards, and entries can be made on the cost sheet either directly from these or from a summary or tabulation of them. But in addition to the material and labor costs, expenses are incurred in the operation of the factory which must be charged as a part of the cost of the goods produced. These expenses are termed *manufacturing expense.* The general nature of these expenses has been discussed in previous chapters.

Because of their nature, manufacturing expenses can not be charged directly to a production order in the same manner as material and labor. For example, if $200.00 is paid for the lighting of all departments of the factory for one month, all the orders passing through the factory during the month should pay some part of this cost, but no part of it can be directly connected with any specific order while it is in process of manufacture. Consequently after the order is completed, it is necessary to apportion to it on some equitable basis some part of the total cost of lighting the factory. So it is with the other manufacturing expenses, such as heat, insurance, taxes, depreciation, and supplies; they are not *requisitioned* for a particular order as are materials, neither is a certain part of them chargeable to an order on a time ticket as is labor. This necessitates the development of some method by which these expenses can be apportioned to the various orders so that each order will bear its share of their cost.

Apportionment of Manufacturing Expenses

Accountants and industrial engineers have given much thought to the problem of apportioning manufacturing expenses. Many

methods of apportioning these have been developed. It is impossible in this discussion to explain all of these methods; consequently it is necessary to select for treatment those which are in most prevalent practice and which best illustrate the general principles which should be followed in distributing such expenses. The methods it is thought will be of the most value for the student to understand are: (a) the labor percentage rate; (b) the labor hour rate; and (c) the production center rate.

Labor Percentage Rate

Probably the simplest method of apportioning manufacturing expenses is to obtain the ratio of the total manufacturing expenses for a certain period of time to the total cost of labor for the same period of time and then apply this ratio to the cost of labor for each order. To illustrate: the total manufacturing expenses for six months are $20,000.00. The total cost of labor employed on all orders during the same period is $40,000.00. The manufacturing expenses for the period, therefore, are fifty per cent of the cost of labor. The cost of the labor used on production order No. 1200, calling for the manufacture of 400 pieces of Commodity A is $600.00. Fifty per cent of $600.00, or $300.00, will be added to the cost of production order No. 1200 for manufacturing expense. If the cost of the materials used on this order is $500.00, its cost will be: Labor, $600.00; Materials, $500.00; and Manufacturing Expense, $300.00, or a total of $1,400.00.

This method of apportioning expenses is satisfactory under some circumstances. If only one product is manufactured, it is satisfactory in most cases, since it is fair to assume that the ratio between labor and manufacturing expenses will be approximately the same on all orders. If two or more products are manufactured, the apportionment of manufacturing expenses on the basis of labor cost will be satisfactory if workmen employed on all commodities receive approximately the same wages and use similar equipment.

In many cases, however, this method leads to inaccurate results. To illustrate: Production Order X and Production Order Y go through the factory at the same time. Very similar operations are performed on each, but the workmen employed on Order X receive a large wage because of their skill and long term of service, while the workmen employed on Order Y receive twenty-five per cent less in wages than those employed on Order X. In this case Order X will be charged twenty-five per cent more for manufacturing expenses than Order Y; yet the cheaper workmen require as much light, heat, and power as the higher priced workmen. In fact, they may require more, for they may work more slowly and take longer to complete the order. The cheaper workmen also cause the machines to depreciate just as

much as the better workmen, and because of a lack of skill they are more likely to make repairs necessary. This illustration shows that, unless the wages paid to workmen are fairly uniform, this method of apportioning expenses may lead to inaccurate results. The labor percentage method was the first method developed and is yet the one most widely used.

The Labor Hour Rate

Many of the expenses of manufacturing vary in proportion to time. Consequently a method of apportioning expenses has been developed which provides for charging each order for expenses according to the time occupied on the order. Under this method the total manufacturing expenses are divided by the total hours all workmen are employed to obtain the manufacturing expenses to be charged to the order. To illustrate: The total number of hours of labor for all workmen for a given period is 12,000, and the total manufacturing expenses for the same period is $2,400.00; therefore the cost of manufacturing expenses per labor hour is twenty cents. There has been expended on Production Order No. 800 two hundred hours of labor. The manufacturing expenses to be added to this order are $40.00.

This method of apportioning manufacturing expenses may be satisfactory if the equipment used throughout the factory is fairly uniform. If not, it may lead to unsatisfactory results. To illustrate: A factory produces two commodities, A and B. On Commodity A there is performed a large amount of hand work, and consequently a large number of labor hours is required for its completion. Commodity B is manufactured almost entirely by machines, and consequently it is produced with less labor hours than Commodity A. If manufacturing expenses are apportioned on the basis of labor hours, Commodity A will be charged a larger portion of the expenses than is Commodity B. Yet Commodity B requires the use of large machines with the consequent cost of power, repairs, etc., while Commodity A, being largely the result of hand work, requires the incurrence of very little expense of this nature. Commodity B therefore should be charged more for expense than A, but this method of apportioning the expense produces the opposite result.

Production Center Rate

To eliminate the difficulties which may arise as the result of using the labor percentage or labor hour method, each department of the factory may be divided into "production centers." Each production center is a group of activities of the same kind or nature. It may be one machine, a group of machines of the same kind, a single hand workman, or a group of hand workmen doing

the same thing. The expenses of the department are apportioned to the production centers and the total expenses incurred in operating each production center for a certain period of time is determined. This amount is divided by the number of hours during which operations are carried on at the center. This gives the hourly expense charge for operating this center. A record is kept of the hours each order is operated on at each production center, and the order is charged at the hourly expense cost for the manufacturing expenses incurred at the center.

To illustrate: The monthly expense cost of production center X is $400.00. The production center operates 200 hours during the month, so that the hourly expense charge is $2.00. Production Order No. 236 is operated on at production center X for five hours; consequently this order will be charged $10.00 for manufacturing expense incurred at this production center.

The apportionment of manufacturing expenses by means of production centers usually gives accurate results and is the most scientific method of apportionment for businesses which obtain costs by production orders. The only disadvantage of this method is the difficulty of determining the amount to be charged to each production center and the cost of keeping a record to show the number of hours each order is worked on at each production center. Because of these reasons, business men have been slow to adopt this method.

Departmental Classification of Manufacturing Expenses

In most cases where two or more products are manufactured, the total manufacturing expenses of the factory can not be apportioned accurately to all commodities on a uniform ratio. There will be some expenses which will be incurred for the benefit of some commodities only. If the factory has two or more departments, there may be some commodities which will not go through all departments, and it is manifestly unfair to charge these commodities with any of the expenses of the departments from which they do not benefit. To take a simple illustration: A lumber company may sell some of its lumber as soon as it comes from the mill, while it is green. The remainder it may send to the kiln to be dried. Some of this may be sold as soon as dried, while some of it may be planed before it is sold. It is obviously unfair to charge any part of the expense of the kiln or planing mill to the green lumber, or any part of the expense of the planing mill to the lumber sold before it is planed.

Furthermore, if a factory has two or more departments, it will usually be found that the ratio between the manufacturing expense and labor, material, or any other factor which is used as the basis for apportionment, will vary from department to depart-

ment. It is usually found advisable, therefore, to apportion the manufacturing expenses to the departments, and to distribute the expenses of each department to the orders passing through that department.

Some expenses can be charged directly to a department. For example, depreciation and repairs on machinery can be charged directly to the expenses of the department in which the machinery is used. Other expenses must be apportioned to the departments on some proper basis. For example, the insurance and taxes on machinery may be apportioned to departments on the basis of the value of the equipment in the departments. The cost of the maintenance of the building may be apportioned on the basis of floor space. The cost of heat may be apportioned on the basis of floor space or in some cases on the cubical space in the departments. After all the expenses are charged to the departments, then each order going through the department will be charged with a part of the expenses of the department. Any of the methods discussed may be used to determine the amount to charge to specific orders.

The Cost Entries

The method of entering the cost of materials and the cost of labor on the cost sheet has been explained in preceding paragraphs. After the entries are made for these costs, the manufacturing expense chargeable to the order for which the cost sheet is kept will be entered. The amount of this expense will be determined by the method of apportionment employed by the business. If the percentage of labor rate is employed, the proper percentage will be applied to the cost of labor as shown by the cost sheet and the result recorded in the expense column. If the labor hour rate is used, the hourly rate will be multiplied by the number of hours shown on the cost sheet to obtain the amount of the expense. If the production center rate has been adopted, the hourly rate for each production center will be multiplied by the number of hours the order was operated on at this center.

After the entries for manufacturing expense, labor and materials are made on the cost sheet, it is totaled and ruled to show the cost of producing the goods called for by the order. The total shown on the cost sheet is entered in the finished goods journal. This journal will be ruled to show: (1) date; (2) production order number; (3) folio; (4) amount column for each commodity or group of commodities manufactured. At the end of each cost period, the total of each amount column in the finished goods journal will be posted to the debit of the Finished Goods account which is maintained with the commodity shown in the column, and credited to the Manufacturing account or Work in Process account maintained with the same commodity.

The operation of the general ledger accounts with Materials, Labor, Manufacturing Expense and Finished Goods has been explained and illustrated in Chapter XLVI, but for the purpose of review the following skeleton journal entries are given:

1. When materials are purchased:

Materials...........................	....	
Accounts Payable.................		....

Entries will be made in the voucher register for each invoice, and the totals posted at the end of the cost period.

2. When materials are transferred from the storeroom to the factory:

Materials in Process.................	....	
Materials.......................		....

Entries will be made in the *requisition journal* from the materials requisitions on which materials are issued from the storeroom.

3. When the wages due factory employes, as shown by the time tickets, are recorded:

Labor..............................	....	
Accounts Payable.................		....

Entries will be made in the voucher register from the pay roll prepared by the pay roll section of the accounting department and the totals posted at the end of the cost period.

4. When manufacturing expenses are incurred:

Manufacturing Expenses (separate account for each class)..........	....	
Accounts Payable.................		....

Entries will be made in the voucher register from the invoices received for these expenses. There will be some expenses, such as charges for depreciation, which will be entered through the general journal.

5. When the ledger accounts are closed, at the end of the cost period:

Manufacturing Account or Work in Process Account.................	....	
Materials in Process...............		....
Labor............................		....
Manufacturing Expense (various accounts)...................		....

A separate Manufacturing account or Work in Process account may be maintained for each commodity or class of goods manufactured. The foregoing entry will be made through the journal or by means of a journal voucher.

6. When finished goods are transferred from the factory to the finished goods storeroom:

Finished Goods....................	....	
Manufacturing or Work in Process..		....

This entry will be made from the completed cost sheets through the furnished goods journal in the manner explained in the preceding paragraphs.

7. When finished goods are sold two entries are made:

Cost of Sales......................	....	
Finished Goods..................		....
Accounts Receivable..............	....	
Sales..........................		....

These entries are usually made from the invoices through the sales record.

Methods of Cost Finding

There are two methods of cost finding in general practice; (a) the *production order* method, and (b) the *process* method. When the production order method is employed, a separate account is opened in the cost ledger for each production order issued. The materials, labor, and manufacturing expense applicable to the order are shown on the cost sheet so that the total cost of the goods called for on the order can be ascertained from the cost ledger account when the production order is completed. This method has been assumed in the preceding discussion in this chapter because the control of production and production costs can be more easily explained and illustrated when costs are obtained on each production order.

In some cases the production order method can not be used. This is usually because the nature of the articles manufactured is such that it is impossible to keep a definite quantity, such as is represented by a production order, segregated from the other articles as it passes through the factory. For example, a company manufacturing a liquid, such as ink, has hundreds of gallons passing through the various processes at one time. It is impossi-

ble to identify any specific quantity, for example, one hundred gallons, and to follow it through the various processes in the manner that a hundred lathes might be followed through a machine shop. The same situation exists in the manufacture of paints, soap, paper, canned goods, nails, and similar articles.

In such cases it is necessary to use the *process* method of ascertaining cost. Under this method a record is kept of the materials and labor cost of each process through which the raw material must pass to become the finished product. The manufacturing expense is distributed according to the method of apportionment in use. The total cost of materials and labor for each process plus the manufacturing expense applicable to that process will give the cost of passing a certain quantity through this process. The cost per unit (pound, gallon, dozen, etc.) for this process is determined by dividing the total cost for the process by the number of units produced. In this way the unit cost for each process is obtained, and by adding these for the entire manufacturing process the total unit cost is determined.

In some cases the unit cost by processes is not obtained, but, instead, the total cost for all processes is determined, and this is divided by the total units completed to obtain the total unit cost. To illustrate the determination of process costs, it may be assumed that there is to be produced a certain quantity of paper which in the course of manufacture passes through four processes. The cost of raw materials and labor in the first process is $200.00; the cost of materials and labor in the second, $120.00; the cost of labor only in the third, $80.00; and the cost of materials and labor in the fourth, $160.00. The manufacturing expense chargeable to the four processes is: first, $40.00; second, $70.00; third, $30.00; and fourth, $60.00. The total cost for the four processes is $760.00. If 15,200 pounds of paper is obtained from the results of the various processes, the cost per pound is five cents.

Cost Reports

The reports used in controlling production operations are more varied in nature than those used in controlling the operations of any other department. This is due to the complexity of production operations and the wide variance between the operations of different manufacturing firms. In most companies numerous and frequent reports are prepared showing an analysis of costs and expenses.

It is impossible to discuss or illustrate these various reports, but it is thought worth while to call attention to two reports which are found typically in every manufacturing firm. These are (a) the summary of manufacturing operations and (b) the departmental expense analysis.

Illustration No. 170 gives a condensed summary of the operations of a plant for the month in a useful form for the production manager and the president. The production manager would have supporting reports which would provide an analysis of the information shown in this illustration.

MONTHLY SUMMARY OF OPERATIONS

.... Works   Month of ....19...

	This Month	Estimated This Month	% of Inc. or Dec.	Last Month	% of Inc. or Dec.	To Date This Year	To Date Last Year	% of Inc. or Dec.
Direct material........								
Direct labor..........								
Indirect labor........								
Factory supervision...								
Other expense........								
Total factory cost..								
Less increase in work in process inventories								
Less increase in plant & equip. inventories								
Add decrease in work in process inventories								
Add decrease in plant & equip. inventories								
Less plant and equipment charges.......								
Factory cost of production...............								

Illustration No. 170, Monthly Summary of Manufacturing Operations

Illustration No. 171 provides an analysis of the expenses of a department in useful form for the superintendent and foremen.

Summary

In the present and the preceding chapter, the general principles involved in the control and determination of costs have been

OPERATING EXPENSE ACCOUNTS

Dept.. ....Company

		For Month of		For...... Months	
	Per Lb.	Current Year	Previous Year	Current Year	Previous Year
55 FOUNDRY EXPENSES....					
100 RAW MATERIALS USED..					
101 Pig Iron....................					
102 Purchased Scrap..............					
103 Machine Shop Scrap..........					
110 REMELT...................					
111 Poor Castings...............					
112 Foundry Scrap...............					
113 Drops, Sprues, etc............					
120 SUPPLIES.................					
121 Coal Used in Cupola..........					
122 Coke Used in Cupola..........					
123 Core Room Supplies..........					
124 Cupola Supplies.............					
125 Molding Supplies............					
126 Flask Supplies...............					
127 Miscellaneous Supplies.......					
130 LABOR....................					
131 Molding—Main Floor.........					
132 Molding—Side Floor.........					
133 Machine Molding............					
134 Core Making................					
135 Melting....................					
136 Cleaning....................					
137 Laborers....................					
138 Flask Makers...............					
139 Foreman and Clerks.........					
140 SUNDRY EXPENSES......					
141 Chemists...................					
142 Maintenance and Repairs.....					
142A Buildings—Labor......					
142B Buildings—Materials...					
142C Equipment—Labor.....					
142D Equipment—Materials.					
150 GENERAL EXPENSES....					
151 Insurance..................					
152 Taxes......................					
153 Depreciation...............					
153A—Depreciation—Bldgs...					
153B—Depreciation—Equip...					
154 Foundry—Office Sal. and Exp.					
155 Heat, Light, and Power......					
156 Miscellaneous..............					
157 Engineering................					
158 Stable and Garage Expense...					
160 UNDISTRIBUTED EXP....					
161 Inward Freight and Express..					
....					
....					
TOTAL FOUNDRY EXPENSES					
Lbs. Casting Produced...........					
Lbs. Casting Sold Outside........					
Lbs. Casting Transferred to Shop..					

Illustration No. 171, Departmental Expense Analysis

explained and illustrated. For the sake of brevity it has been necessary to assume in some cases a definite procedure where in practice there are several methods which might be followed. The student will understand that it is not intended that the procedures or methods explained be regarded as arbitrary ones. They are intended to be suggestive only. It is the opinion of the author that the subject of cost accounting is so technical and involves so much detail that the most that can be given the student in a general accounting course is the background which will enable him to master any particular system which he may need to use or operate. If he understands the general purposes and problems of cost finding and the customary methods of attaining these purposes and solving these problems, he should be able to master the technique of any specific system within a reasonable time. To give such an understanding is the purpose of the preceding discussion. Those who are interested in a further treatment of cost accounting are referred to the standard manuals on cost finding.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

A. W. Torbet is production clerk for the Frazer Manufacturing Company. He is responsible for the initiation of all production orders. How will he know when an order should be issued?

— 2 —

Torbet prepares the production orders in quadruplicate and sends one copy to the cost accounting section of the accounting department. Why?

— 3 —

The Frazer Manufacturing Company finds in some cases, after production orders are issued and work commenced by the factory departments, that it must be stopped because the raw materials needed are not available in the storeroom. How may this condition be avoided?

— 4 —

How can the cost accounting section identify the materials and labor used on an order with that order?

— 5 —

The Frazer Manufacturing Company manufactures standard articles, and consequently produces these in advance of customers' orders and places them in stock. The Jackson Manufacturing Company manufactures to order, each order being made according to the specifications of the customer. In what way would the problem of production and inventory control in the two companies be different?

— 6 —

State the information which it may be desired to obtain from the labor tickets and explain how this information is secured.

— 7 —

How does the cost accounting section know when the goods called for by a production order have been completed and delivered to the storeroom? What does this section do when it knows these have been completed?

— 8 —

State the information which is contained on the "cost sheet" and explain how this information is obtained.

— 9 —

Explain the operation of each of the following methods of apportioning manufacturing expenses to orders: (a) labor percentage rate; (b) labor hour rate; (c) production center rate.

— 10 —

Explain under what circumstances you would advise the use of each of these methods.

— 11 —

Explain the disadvantages of each of these methods.

— 12 —

What advantages may be obtained from a departmental classification of expenses?

— 13 —

Explain how the following expenses may be distributed to departments: (a) heat; (b) light; (c) insurance on machinery; (d) insurance and taxes on the factory building.

— 14 —

The Frazer Manufacturing Company purchases steel castings which are to be used in the manufacture of one hundred machines. Explain the entries which will be made in the accounts from the time the castings are purchased until the finished machines are sold.

— 15 —

Explain and illustrate the difference between the production order method and the process method of determining costs.

LABORATORY MATERIAL

Exercise No. 241

The Kirker Manufacturing Company maintains a factory ledger in which is kept the accounts showing the cost of factory operations. This is a subsidiary ledger, and is controlled by a Factory Ledger account in the general ledger.

On January 31, after one month's operations and before all the entries have been made, the factory ledger shows the following account balances:

Finished Goods	$ 8,600.00	
Work in Process	1,450.00	
Materials and Supplies	14,400.00	
Power Expenses	740.00	
Building Expenses	880.00	
General Factory Expenses	90.50	
Dept. A, Carpenter Shop	410.00	
Dept. B, Machine Shop	575.00	
General Ledger Control	....	$27,145.50

The balance in the Materials and Supplies account represents the purchases to date, and the Work in Process balance represents the inventory January 1, as follows: Order No. 1001, $400.00; Order No. 1002, $300.00; Order No. 1003, $750.00.

When expenses are incurred by the factory, they are debited to the departmental accounts if the amount applicable to each department can be determined at that time; if not, these expenses are debited to appropriate expense accounts and distributed to the departmental accounts at the end of the month. The Power Expenses account will show the cost of maintaining the power plant after the salary of the engineer and fireman has been debited to it. The General Factory Expense account will show all factory expenses not recorded in another account after the salaries of the superintendent and watchman have been debited to it. Labor in each department, applied directly to orders in process, is not an expense of the department but a charge to Work in Process.

The timekeeper submits the pay rolls and these, when analyzed, are found to consist of the following salaries and wages paid by the general office which are not shown on the factory ledger:

Superintendent	$150.00
Watchman	40.00
Engineer and Fireman	160.00
Foreman and Clerk, Dept. A	120.00
Foreman and Clerk, Dept. B	135.00
Mechanics, Dept. A:	
On Order No. 1001, 2,000 hours	800.00
On Order No. 1002, 1,500 hours	450.00
On Order No. 1003, 2,000 hours	600.00
Mechanics, Dept. B:	
On Order No. 1001, 1,500 hours	400.00
On Order No. 1002, 2,500 hours	600.00
On Order No. 1003, 1,000 hours	300.00

The storekeeper turns in requisitions for materials used, which are analyzed and found to be for the following which are not shown on the factory ledger:

Order No. 1001	$900.00	Supplies, Dept. A	50.00
Order No. 1002	300.00	Supplies, Dept. B	75.00
Order No. 1003	800.00	Repairs, Dept. B	160.00

Department A covers 6,000 square feet and uses 100 horse power. Department B covers 10,000 square feet and uses 500 horse power.

Manufacturing expenses are charged to jobs on the following basis: in Department A, each job is charged sixty per cent of the cost of labor for manufacturing expenses; in Department B, each job is charged fifty cents per labor hour for manufacturing expenses.

The storekeeper reports the completion of the following orders and their receipt in the storeroom: Order No. 1001, 3,000 pieces; Order No. 1002, 1,250 pieces.

The storekeeper also reports the shipment of goods which, being priced and totaled, are found to have cost $12,000.00.

INSTRUCTIONS: 1. Preparatory to posting to the factory ledger, record the following, in journal form:

(a) The pay rolls submitted by the timekeeper.

(b) The materials and supplies used.

(c) The distribution of power expense, building expense and general factory expense to the departmental accounts.

(d) The transfer of manufacturing expenses chargeable to jobs from the departmental accounts to the Work in Process account.

(e) The completion of Orders Nos. 1001 and 1002.

(f) The cost of goods shipped.

2. Construct ledger accounts, recording the balances listed on page 1023, and post the journal entries.

3. Take a Trial Balance of the factory ledger

Exercise No. 242

The McMahon Lumber Company classifies its operations under the following heads: Logging (wood), Transportation (to pond at sawmill), Sawmill, Kiln Drying.

During the month, the Logging account is debited for all expenses in connection with cutting the timber. At the end of the month, one half the general operating expense is distributed to it. The cost of stumpage (standing trees before operations are begun) is also debited to the Logging account at $1.50 per thousand feet for all logs cut; the Stumpage account on the general ledger is credited at the same time. At the end of the month, the total cost of all logs cut and ready for transportation to the pond at the sawmill is taken out of the Logging account and debited to the asset account, Logs in Woods.

During the month, the Transportation account is debited for the cost of conveying the logs cut to the pond at the sawmill. At the end of the month, the total cost of the logs transferred to the pond (including the cost of the logs in woods plus the cost of transferring these logs to the pond) is taken out of the Logs in Woods and Transportation accounts and debited to the asset account, Logs in Pond.

During the month, the Sawmill account is debited for all expenses in connection with operating the sawmill. At the end of the month, one half the general operating expense and 60% of power expense are distributed to it. The cost of the logs transferred from the pond to the sawmill for sawing is also debited to the Sawmill account. At the end of the month, the cost of the lumber produced by the sawmill is taken out of the Sawmill account and debited to the assets accounts, No. 1 Lumber Green, No. 2 Lumber Green, and Slabs. Manufacturing expenses are divided between No. 1 and No. 2 lumber on the basis of the feet produced. Slabs are worth $2.00 a cord.

During the month, the Drykiln account is debited for all expenses in connection with drying the lumber after it is sawed. At the end of the month, 40% of power expense is distributed to it. At that time also, the total cost of lumber dried (including the cost of the green lumber and the cost of drying it) is taken out of the No. 1 Lumber Green, No. 2 Lumber Green, and Drykiln accounts and debited to the asset accounts, No. 1 Lumber Dried and No. 2 Lumber Dried.

When lumber is shipped, the Cost of Sales account in the general ledger is debited and the proper asset accounts credited—i. e., No. 1 Lumber Green, No. 2 Lumber Green, No. 1 Lumber Dried, No. 2 Lumber Dried, and Slabs.

Below is given the account balance in the subsidiary operating ledger after all the known expenses of operation have been charged, but before the reports of operating foremen have been received. The various inventory accounts represent the balances at the beginning of the month before the month's operations have been entered.

Logs in Woods, 700,000 feet	$4,200.00	
Logs in Pond, 1,000,000 feet	7,000.00	
No. 1 Lumber Green, 350,000 feet	5,250.00	
No. 2 Lumber Green, 500,000 feet	5,000.00	
No. 1 Lumber Dried, 200,000 feet	3,400.00	
Slabs, 300 Cords	600.00	
Logging	6,200.00	
Transportation	1,625.00	
Sawmill	7,205.50	
Drykiln	500.00	
Power Expense	700.00	
General Operating Expense	1,200.00	
General Ledger	....	$42,880.50

Reports from operating foremen:

Logs cut	1,550,000 feet
Logs hauled to sawmill pond	1,350,000 feet
Logs sawed	1,400,000 feet
Lumber produced, No. 1 grade	500,000 feet
Lumber produced, No. 2 grade	800,000 feet
Slabs cut	175 cords
Lumber dried, No. 1 grade	300,000 feet
No. 1 Lumber Green shipped	250,000 feet
No. 2 Lumber Green shipped	600,000 feet
No. 1 Lumber Dried shipped	150,000 feet
Slabs shipped	250 cords

INSTRUCTIONS: 1. Prepare journal entries to record the above on the books and to close the accounts.

2. Construct ledger accounts, recording the balances listed on page 1024, and post the journal entries.

3. Take a Trial Balance of the subsidiary ledger.

Exercise No. 243

The Torr Manufacturing Company has its factory divided into three departments. In each department all the operations are sufficiently the same for the department to be regarded as a "producing center", if desired. The records of the company show the following results for the year:

	Dept. A	*Dept. B*	*Dept. C*
Materials Used	$20,000.00	$10,000.00	$10,000.00
Productive Wages Paid	6,400.00	5,000.00	7,000.00
Manufacturing Expenses	8,000.00	5,000.00	5,600.00
Productive Labor Hours	16,000	10,000	20,000

The factory operated 2,000 hours during the year.

The cost ledger shows the following results with reference to Production Order No. 250, which passed through the factory during the year:

	Dept. A	*Dept. B*	*Dept. C*
Material Used	$2.00	$4.00	$2.00
Labor Cost	3.20	3.00	2.10
Labor Hours	8	6	6

The total time Production Order No. 250 was worked on in each department was as follows: Dept. A, 48 minutes; Dept. B, 36 minutes; Dept. C, 36 minutes.

INSTRUCTIONS: 1. Explain three methods which may be employed in apportioning the manufacturing expenses to production orders.

2. Determine the cost of Production Order No. 250 when each of these three methods of apportioning expenses is used.

COST ACCOUNTING SET

Further practice in cost accounting is provided in the practice set which is separate from the text.

CHAPTER LXVII

ACCOUNTING FOR CASH AND CREDIT

Relation of Accounting Department to Cash Transactions

The treasurer is usually head of the financial department. In a business of any considerable size the treasurer has as his assistant a cashier who is responsible for the handling of cash receipts. The cashier receives all incoming cash and deposits it to the credit of the company. He reports to the accounting department the cash received analyzed by sources, the deposits made, and the bank in which deposited.

Disbursements are usually made only upon approved vouchers. These vouchers are usually prepared by the accounts payable section of the accounting department. All invoices after they are approved by the purchasing department are sent to this section, which completes their audit and prepares a voucher to which the invoice is attached and filed under the date when payment is to be made. On the date of payment the voucher is removed from the file and a check prepared and submitted with the voucher to the treasurer or his assistant for his signature. The accounts payable section is usually responsible for the preparation of the voucher, its record, and the record of the checks issued, as well as the preparation of the check. It, therefore, performs services for both the accounting and the financial departments.

In some companies the treasurer is responsible for the accounting, as well as the finances, of the business. In this case, the accounts payable section is entirely under his control. If the accounting department is not under the jurisdiction of the treasurer, then the accounts payable section is under the joint control of the head of the accounting department and the treasurer. The modern tendency is to have the accounting department independent of the treasurer; this is preferable, for then the accounting department serves as a check on the operations of the financial department.

The relation of the treasurer to the receipt and disbursement of cash is shown in diagram form in Illustration No. 172.

It is the purpose of this diagram to show the following:

(1) The sales department makes sales to customers which give rise to accounts receivable.

(2) The cashier receives cash from:
   (a) Collections from accounts receivable;
   (b) Sales of bonds or stocks;
   (c) Bank loans;
   (d) Miscellaneous sources, such as interest on bank loans, sale of fixed assets, and sale of securities.

(3) The cashier deposits all cash in the bank.

(4) All cash drawn out of the bank is by means of checks, which are prepared by the head of the accounts payable section and signed by the treasurer.

(5) The head of the accounts payable section draws checks to pay:
   (a) Accounts payable;
   (b) Bank loans;
   (c) Bonds or notes issued to others than banks;
   (d) Petty cashier for disbursements made from petty cash fund;
   (e) Miscellaneous, such as taxes, insurance, interest, and dividends.

(6) The accounts payable arise as the result of purchases made for the purchasing, production, or operating departments.

(7) The cashier and the head of the accounts payable section are under the control of the treasurer, although the accounts payable section has a joint responsibility to the accounting department and the treasurer.

Handling the Cash Receipts

With the exception of the retail store, which receives a considerable amount of cash in payment of cash sales, the major receipts of cash are in payment of accounts receivable. The cash is received by the mail department and is sent to the cashier at once. The cashier must see (a) that all cash received by him is deposited daily, and (b) that all parties interested in the cash receipts are notified of their amount and nature. The parties interested in the cash receipts are stated on page 1029.

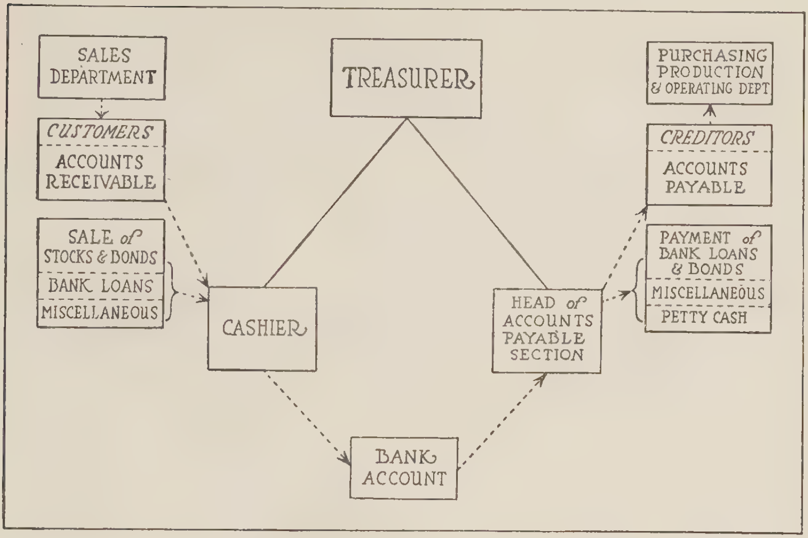


Illustration No. 172, Diagram Showing Relation of Treasurer to Cash Receipts and Disbursements

(1) The General Ledger Accounting Section.—This section is responsible for the maintenance of the general financial records. It must have information on cash receipts for the preparation of its cash book record.

(2) The Accounts Receivable Section.—This section is responsible for the maintenance of the accounts receivable ledger. It must know all payments made by customers so that the credits to the customers' accounts can be made.

(3) The Collection Department.—This department is responsible for collecting past due accounts. It must be informed of payments by customers that it may know when accounts turned over to it for collection are paid. Usually it is informed of all payments, and it checks off those made on the accounts past due.

(4) The Treasurer.—He is responsible for the maintenance of the cash balance, and accordingly desires to know the daily cash receipts and disbursements. The cashier reports to him the daily cash receipts, which are the same as the daily cash deposits, and the accounts payable section reports to him the daily cash disbursements.

The information desired by these parties is obtained in the following manner:

(1) The cashier records all cash received on a loose-leaf record ruled in the form desired by the general ledger accounting section. At the end of the day, the sheets used during the day are sent to the general ledger accountant. He files these in a loose-leaf binder, and they constitute his cash record. Usually the cashier makes the record of cash received in duplicate and retains the duplicate for his record.

(2) The cashier makes in duplicate a "settlement sheet" for each remittance received from a customer. A comprehensive form of settlement sheet is shown in Illustration No. 173. In a small company a more simple form may serve satisfactorily.

SETTLEMENT SHEET

	Customer's Check
(1) Date..................................	(4) Date.................
(2) Name..................................	(5) Number..............
(3) Address...............................	(6) Amount..............

INVOICES PAID

(7) Date	(8) Amount	(7) Date	(8) Amount

SUMMARY

(14) Total Inv. Paid	
(15) Total Deductions	
(15) Credit to Customer	
(17) Cash Discount	
(18) Deposit in Bank	

DEDUCTIONS ON INVOICES

(9) Date	(10) Amt. of Inv.	(11) Amt. Deducted

ADDITIONS MADE

(12) Date	(13) Amount

Illustration No. 173, Settlement Sheet

In some lines of business, such as some public utilities, a remittance slip is sent to the customer attached to the invoice. This slip is detached and returned with the remittance. It may take the place of a settlement sheet.

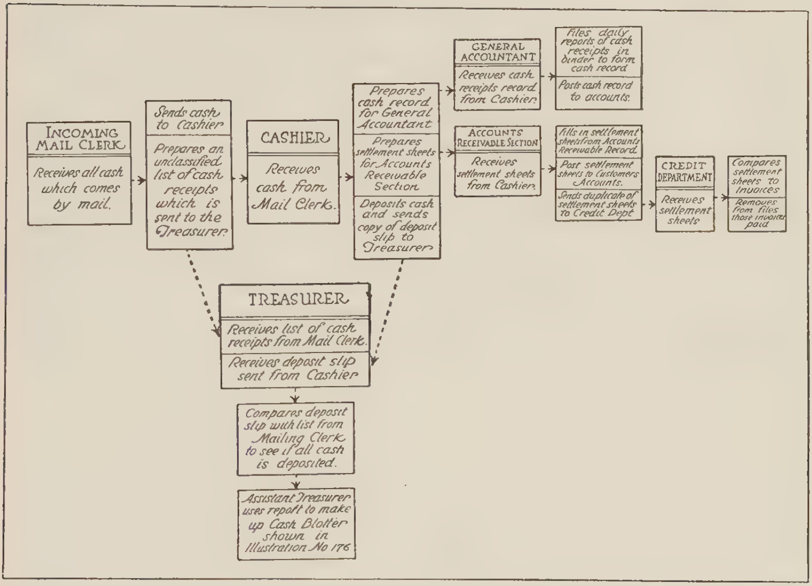


Illustration No. 174, Procedure for Handling Cash Receipts

The cashier will fill in the information requested by items (1) to (6) inclusive. Wherever any of the other items of information requested by this form are furnished by the customer, the cashier will also show them in the proper spaces on the settlement sheet. The cashier will balance the settlement sheets against the remittances received and send the settlement sheets in duplicate to the accounts receivable section.

The accounts receivable section will check the remittances as shown by the settlement sheets against the ledger accounts and will fill in the remaining information called for by the sheets. After the settlement sheets have been completed, the remittances made by the customers will be posted to their accounts from the original settlement sheets. If bookkeeping machines are used for posting, the total of all the credits posted to the customers' accounts can be obtained from these machines when the posting is completed. This total can be checked against the total of the settlement sheets obtained by means of an adding machine recapitulation.

(3) The accounts receivable section, after it has completed the settlement sheets, will send the duplicates to the collection department. From these sheets the collection department can check off the accounts they are holding for collection.

(4) The mail department makes an unclassified list of all cash receipts turned over to the cashier. This list is sent to the treasurer. The cashier sends to the treasurer duplicates of the daily deposit slips. This enables the treasurer to know the total deposits for the day and to check deposits against receipts.

This procedure is shown in diagram form in Illustration No. 174.

In a retail business a considerable amount of cash is received by the sales clerks in payment of cash sales. This is sent to the cashier by means of a conveyor system. The daily cash receipts from sales are entered as a total on the record of cash receipts. No notice to the accounts receivable section or the collection department is necessary. Otherwise the procedure is the same as that outlined for handling cash received on account.

Handling the Cash Disbursements

The accounts payable section of the accounting department is usually responsible for initiating all cash payments which result from the ordinary operations of the business. The student is familiar with the preparation, payment and record of vouchers payable. The accounts payable section enters all checks issued in a duplicate loose-leaf record of cash disbursements. The original of this record is transferred to the general ledger accountant and constitutes his record of cash disbursements from which he posts to the general ledger. The head of the accounts payable section reports to the treasurer the total of each day's payments.

In a large company some payments will be made by members of the field organization. Usually "working funds" or petty cash funds are established for their use. The method of handling these funds has been explained previously.

Granting of Credit

The credit department is usually a subdivision of the financial department. It is the function of this department to pass either directly or indirectly upon each sales order for the sale of merchandise on account. Its method of doing this depends upon whether the request for credit is from one who has not had former relations with the house or is from a former customer.

When an original request is received, the credit department will have no information on hand with reference to the pros-

pective customer and must begin an original investigation of the applicant's credit standing. The sources of information with reference to a prospective customer are numerous, but the following are those of most importance: (a) the applicant, (b) the salesman, (c) mercantile agencies, (d) credit associations, (e) miscellaneous.

Many firms have standard forms which they provide applicants for credit on which to submit information with reference to themselves. These forms usually call for a Balance Sheet, a condensed Statement of Profit and Loss, and answers to various questions with reference to the nature of the firm's proprietorship, contingent liabilities, outstanding orders, etc. Formerly little attention was given to the Statement of Profit and Loss in the granting of credit; the present tendency is to attach very great importance to it. The applicant for credit is in a better condition to give information with reference to himself than anyone else. There is always the danger, however, that the information he provides may be inaccurate. The modern tendency of presenting a Balance Sheet and Statement of Profit and Loss which have been verified and attested as correct by a certified public accountant will do much to insure the reliability of the information presented by the applicant.

Many firms require the salesman, when he obtains an original order, to send with it his opinion of the financial condition of the purchaser and to support this opinion with such information as he is able to secure. Although the salesman may be in a position to obtain much valuable information, he is limited in his investigation. An alert salesman is able to learn if the various companies he solicits are progressive, and if their respective markets are promising. It is not likely that he will know the exact figures on the financial condition of his buyers, and there is a tendency for the salesman to be over-optimistic, since he naturally desires to increase his sales as much as possible.

There are mercantile agencies, the best known of which are R. G. Dun & Co. and Bradstreet, whose purpose it is to collect information on the financial condition of business firms. All firms are graded by a standard developed by the agency and given a rating in a report the agency sells to business men. This report is revised frequently that it may provide up-to-date information with reference to all business firms. The agencies maintain a staff of reporters, who by personal visit and investigation collect the information it uses in establishing the firms' ratings. The agency reports are very valuable, but it is unwise to place too great dependence in them. The representatives of the agency may be misled and may not obtain accurate information, since they must depend to a considerable degree on the information supplied by the business it is rating. The ratings given in the reports of the two principal agencies should be compared to see

if they agree. If there is disagreement, this serves as a warning. In any case, the agency rating should be verified by information gained from other sources.

In many cities credit men's associations have been organized which collect information with reference to merchants and have this available for the information of its members. The members supply information with reference to their customers, and in this way much valuable data can be collected. In some cases the local organizations affiliate with a national organization, and, by this means, service may be rendered on a larger scale. There are also organizations in particular lines of trade which collect and distribute credit information.

There are miscellaneous sources of credit information, such as banks, attorneys, other merchants, and local correspondents. All of these may be used to advantage under some circumstances.

When a former customer asks for additional credit, all of the sources of information which have been discussed may be employed, but usually the first information sought is that shown by the records of the credit and accounting departments. There are two reasons for this: (1) These various sources of outside information have no doubt been utilized at the time of the first order received from the customer, and, as a result of this investigation, the customer has been given a rating which is shown in the accounting and credit records. (2) The record of the customer's dealings with the firm serves as a check upon the original rating. If his relations with the firm confirm the original estimate of the credit department, it is unnecessary to investigate his credit in detail again unless considerable time has elapsed since the first investigation, or something unfavorable with reference to him has been brought to the attention of the credit department.

If the original investigation of a customer's credit shows him to be a satisfactory credit risk, it is customary to set a credit limit up to which his account may extend without further permission from the credit department. In many cases, this credit limit is shown on the customer's card in the accounts receivable ledger. When an order is received, it will be referred to a clerk in the credit department or to the accounts receivable section in the accounting department, and the customer's ledger record will be examined. If the sales order does not bring his indebtedness to the firm above the credit limit which has been set, the order will be approved without further investigation and sent to the proper department to be filled. If the new order causes the customer's account to be beyond the credit limit originally set by the credit department, it must be referred to the head of that department or to one of his principal assistants for consideration. The credit department may decide to accept the order even though it results in extending the original credit limit allowed

to the customer. In fact, it is customary to be conservative and set the limit low.

The establishment of credit limits relieves the credit department of a considerable amount of work in passing upon orders, and, if properly used, they are quite satisfactory. There are many customers who never purchase from the firm as large an amount as their financial condition would warrant. It requires only useless work to have each sales order from such companies passed upon by the executives of the credit department. If this method is employed, it is necessary, however, that the credit department have up-to-date information with reference to its customers, that it may be aware of any changes in their financial condition which are of sufficient importance to necessitate a change in their credit limits as originally established.

It is customary, therefore, for the credit department to maintain some kind of a record for each of its principal customers. It is usually not necessary to maintain such a record for customers who make small intermittent purchases, and it is also not customary to set a credit limit on such customers but to require that each of their orders be referred to the credit department for consideration.

The records kept by the credit department may be of various kinds. Usually considerable information is collected with reference to the customer at the time of the original investigation of his credit. This will usually be filed, and, as new information is obtained with reference to the customer, this will be filed with the original data. The credit departments of some firms keep no other record with reference to the individual customers and turn to their files whenever information is desired. In a small business this method may be satisfactory, but in a business where there are many customers, this procedure proves uneconomical.

Name.................... Town.................. State..................
Salesman................ Business............... Population.............

Date	Ratings				Order	Canceled	Charged	Retd.	Net Sale	Trms	Paying Record			Comment
	D	B	C	S							Disct.	4 Mos.	Slow	

Illustration No. 175, Customer's Credit Record

It is desirable, therefore, to establish a credit record for each customer, upon which is maintained the essential information with reference to him. The form of this record, of course, will vary, depending upon the methods of sale and the general business procedure of the firm. A typical form is shown in Illustration No. 175.

By the use of a form similar to the one shown in Illustration No. 175, the credit department can obtain quickly the information it needs at any time with reference to any of its regular customers. If it desires more detailed information, this can be obtained by reference to its files.

To keep such a form up-to-date requires considerable labor, and some credit departments prefer to refer to the ledger account of the customer to obtain most of the information contained on it. This procedure, however, is likely to interfere with the work of the accounts receivable section, and there are some advantages in having the credit department maintain a separate record for its information. This can be accomplished without difficulty by having a copy of each voucher which affects the customer's account sent to the credit department so that an entry can be made on the customer's record.

Handling of Collections

The practices of business firms vary greatly with reference to the handling of collections. In some firms a copy of each sales invoice is sent to the credit department and is filed by it under the date of payment. If this method is followed, it is necessary to have some means of determining whether the invoices are paid when due. One method is for the credit department to remove from the file each day all invoices falling due on that date and to send them to the accounting department. The accounting department checks these invoices against the ledger accounts and returns to the credit department those which have not been paid. The credit department may then request the customer to remit and file the invoices under a date a short time in advance so that if the remittance is not made promptly, the collection can be followed up.

Another method is for the cashier to prepare in duplicate a settlement sheet for each remittance received from the customer. These settlement sheets are sent to the accounts receivable section, and, after they have been compared with the ledger account and filled in in the manner previously described, one copy is sent to the credit department. From these sheets the credit department can ascertain the invoices which have been paid and remove these from its file.

In some companies a copy of the invoice is not sent to the credit department, but, instead, it receives a copy of the statement sent to the customer at the end of the month. These statements should be paid within a reasonable length of time thereafter, depending upon the terms which have been made with the customer or upon the customs of the trade. For example, in some lines of business, statements are sent to the customer on the first day of the month with the understanding that they are to be paid on or before the fifteenth day of the month. The credit department files the statements under the date when they are expected to be paid. When remittances are received, a copy of the settlement sheet will be sent to the credit department and it can remove from its files the statements which have been paid as shown by these sheets. The statements which are not paid according to the terms agreed upon will be removed from the files, and a letter will be sent to the customer, reminding him of his failure to pay at the proper time and requesting remittance. The unpaid statements will then be filed under a date a short time in the future, and, if not paid by that time, a second letter will be sent. The statements are again filed under a future date, and proper action will be taken if payment is not made.

To illustrate, a statement may be sent on the first of the month, with the understanding that it is to be paid on or before the fifteenth day of the month. The credit department will file a copy of the statement under date of the fifteenth of the month. Letters will be sent to all customers who have not paid by the fifteenth, and statements will be filed under date of the twenty-fifth. Another letter will be sent to those who have not paid by the twenty-fifth, and the statements will be filed so that they will be brought to the attention of the proper executive in the credit department within ten days. By this means there is no danger that there will be a failure to follow up a delinquent customer, since the statements which require action each day will be automatically brought to the attention of the proper party.

There are various methods of handling collections, but it is thought that those discussed are sufficiently typical to give the student a general idea of collection procedure. It should be emphasized in this connection that, regardless of the amount of information which may be kept by the credit department, the final and authoritative record of the relation of the customer to the business is his account in the accounts receivable ledger. It is very desirable, therefore, that his record be kept accurate and up-to-date. To accomplish this, all sales should be entered to the debit of the customer's account immediately. This can easily be accomplished by sending a copy of the sales invoice to the accounts receivable section of the accounting department so that entries may be made from these daily. In some small businesses

where a detailed sales journal is kept, postings may be made from this to the accounts receivable ledger. If this practice is followed, the posting should be made daily and not delayed until the end of the month when the postings are made to the general ledger.

In the same manner, the credits to the customers' accounts should be posted daily from settlement sheets, remittance slips, or the cash record. The terms of sale should be placed in the explanation column of the customer's account. It is also well to indicate on the credit side of the account the method and time of payment by the customer. The time of payment is, of course, indicated by the date. If the customer pays cash, this may be indicated in the explanation, or the practice may be followed of indicating all methods of payment other than cash, and, assuming that when no explanation is given, cash is paid.

If a customer gives a trade acceptance or note in settlement of his account, this will be shown in the explanation column of the account. If the customer does not pay the acceptance or note when it becomes due, it should be charged back to his account and taken out of the Notes Receivable account. By this means the account will show at any time in the future that the customer dishonored his acceptance or note, and this is very important information from a credit point of view. If the acceptance or note is worthless or doubtful, it should be taken out of the account as soon as it is charged to it and transferred to the debit of the Reserve for Bad Debts account, but it should be passed through the customer's account so that this essential information will be shown in his account.

Reports on Cash and Credits

It is necessary for the treasurer and his assistants to be informed at all times concerning the cash position of the company. It is also necessary for them to keep in close touch with the accounts receivable outstanding, the collections made, and the accounts payable falling due in the near future. Without this information it is impossible for them to have sufficient cash at all times to meet current needs and at the same time avoid a surplus. The treasurer should receive reports daily from the cashier and the accounts payable section of the accounting department showing cash receipts and cash disbursements respectively. The cash receipts should be classified to show the sources from which they are received, and the cash disbursements should be classified to show the purposes for which they are made. He should also receive reports on collections, past due accounts, and the accounts payable falling due within the next week.

Sometimes the treasurer has prepared for his use a "daily cash blotter" which may be similar in form to Illustration No.

DAILY CASH BLOTTER

A. Bank Balances and Bank Loans

Name of Bank	Balance at Opening of Day	Deposits	Withdrawals	Balance at End of Day	Loans	% Balance To Loans	Credit Line

B. Accounts Receivable				C. Accounts Payable				
Accts. Rec. Out'ding Day Preceding	Collections Today	Shipments During Day	Balance at End of Day	Accounts Payable Preceding Day	Payments	Purchases	Balance End of Day	Due During Following Week

Illustration No. 176, Daily Cash Blotter

176. The value of this report to the treasurer is evident. The bank balances show him the amount of the cash balance of the company and where it is deposited. It also shows him the volume of cash receipts and disbursements and the banks where the cash receipts have been deposited. The comparison of bank loans at each bank with the bank balance at each bank shows him the bank balances which may be decreased without decreasing bank loans. Banks usually require that the cash balances bear a satisfactory ratio to the line of credit which the company has with them. Large banks usually insist that the cash balance be 20% of the line of credit. The comparison shown between the line of credit, loans outstanding, and cash balance shows the banks at which additional loans may be made.

The information on accounts receivable and collections indicates the efficiency of the credit and collection department and also affords a basis for estimating the receipts from accounts receivable in the immediate future. The comparative information on accounts payable indicates the promptness with which the company is meeting its obligations and affords a basis for estimating the immediate cash needs for paying accounts payable.

The president should receive periodic information on cash balances, bank loans, and lines of credit. Illustration No. 177 shows a useful form for this purpose. The information shown on this report is self-explanatory.

THE BLANK BOND AND MORTGAGE COMPANY

Bank Report for Week Ending February 17, 1927

Bank	(A) Average Balance	(B) Line of Credit	(C) % of A to B	(D) Loans from Bank	(E) Date of Maturity
Citizens' State Bank..	9,158.39	50,000	18%	25,000 25,000	3–28–27 3–21–27
Jackson Park.........	8,588.91	50,000	17%	50,000	5– 9–27
Union Bank..........	9,872.66	50,000	20%	16,000 5,000 4,000 10,000 5,000 10,000	2–21–27 5–20–27 3– 1–27 3– 3–27 6– 1–27 9– 2–27
Union Trust Company	1,112.47				
University State......	3,214.82	10,000	32%	10,000	2–21–27
Washington Park.....	3,052.86	15,000	20%	15,000	3–15–27
Commercial Trust....	2,185.64	5,000	44%	5,000	7– 5–27
Boulevard Bridge.....	5,000				
Totals...............	42,185.75	180,000	23%	180,000	

Illustration No. 177, Weekly Report on Bank Balances, Loans, and Lines of Credit

Illustration No. 178 shows a report on accounts receivable which is useful to both the treasurer and the credit manager. Illustration No. 179 shows a similar report on collections. These reports are designed for use by a company which sells its product through branches. The same type of report can be used by companies making sales without the use of branches by changing the information shown in the first column.

These reports are intended to be only indicative of the various reports which may be made on cash and credits.

MONTHLY REPORT ON ACCOUNTS RECEIVABLE

Month of..........19..

Sales Unit	Accounts Receivable this Month		Per Cent Increase or Decrease	Ratio of Accts. Rec. to Sales This Year	Ratio of Accts. Rec. to Sales Last Year Same Date
	End of Month	Beginning			
Detroit Branch.......					
New Orleans Branch..					
Boston Branch.......					
New York Branch....					
Chicago Branch......					
Seattle Branch.......					
Philadelphia Branch..					
Portland Branch......					
Los Angeles Branch ..					
Other than branches..					
....					
....					
....					
Total...............					

Illustration No. 178, Monthly Report on Accounts Receivable

MONTHLY REPORT ON COLLECTIONS

Month of..........19..

Sales Unit	Estimate this Month		Per Cent Est. Collect. to Est. Sales	Actual this Month		Per Cent Collections to Sales		
	Sales	Collections		Sales	Collections	This Mo.	Last Mo.	Same Mo. Last Year
Detroit Branch.								
N. Orleans Bch.								
Boston Branch.								
N. York Branch								
Chicago Branch								
Seattle Branch.								
Phila. Branch..								
Portland Bch...								
Los Angeles Bh.								
Other than branches								
....								
....								
....								
Total..........								

Illustration No. 179, Monthly Report on Collections

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The general accounting section, the accounts receivable section, the collection section, and the treasurer are all concerned with the amount of cash received daily. Explain the purposes for which each uses this information.

— 2 —

Explain the purpose and contents of the settlement sheet.

— 3 —

Compare the procedures for handling cash receipts in a manufacturing business with the same procedure in a retail department store.

— 4 —

Trace the course of an invoice payable from the time of its approval by the purchasing agent until its final disposition. Explain all entries which will be made in connection with it.

— 5 —

The treasurer exercises control over disbursements by check, since his signature is required on each check issued. In what way may he exercise a similar control over petty cash disbursements?

— 6 —

You are a bond salesman. You understand that the X Company desires to invest some of its excess funds. How would you proceed to interest the X Company?

— 7 —

Explain and illustrate the importance of credit control.

— 8 —

The treasurer of the Jefferson Company has been responsible for its credit policy. This treasurer's theory is that as long as a customer is honest and willing to pay, he should be permitted to buy goods on account. What do you think of such a policy?

— 9 —

You have been asked to examine the methods of the credit department of the Rector Trading Company. The outstanding defect that you find is that there is no co-operation between the credit and financial departments. State your argument to the president of the company as to why there should be greater co-operation between these departments.

— 10 —

Trace the procedure by which the credit standing of a prospective customer is investigated.

— 11 —

"The present tendency is to attach very great importance to the Statement of Profit and Loss in credit granting." Why should so much importance be attached to it?

— 12 —

The credit manager of the X Company says that he uses Dun and Bradstreet exclusively in determining the desirability of a customer for credit. What criticism would you make of such a policy?

— 13 —

Compare the method of obtaining information with reference to a new applicant for credit with the method of obtaining information with reference to a former customer. Explain the reason for the difference in method.

— 14 —

Upon investigation of the credit methods of the Y Company you find that no limit has been placed upon the amount of credit any of the customers may secure. What reasons would you give to the manager of the credit department to induce him to establish the opposite policy?

— 15 —

Explain the nature of the information which the credit department should keep with reference to customers and the method by which this information may be maintained for ready use.

— 16 —

The Paterson Mercantile Company finds that its collection system is inadequate. Many accounts are overdue and the credit department is lax in enforcing payment. You are asked to investigate the cause. Explain the principal defects which you would expect to find.

— 17 —

Explain the method of maintaining an accounts receivable ledger so that it will be of most service to the credit department.

— 18 —

"It is the function of the credit department to pass either directly or indirectly upon each sales order for the sale of merchandise on account." Explain how the credit department may pass *indirectly* on the sales orders

— 19 —

Explain the content and purpose of the reports on accounts receivable, collections and bank balances and loans, which are shown in Illustrations Nos. 177, 178, and 179.

— 20 —

Explain the content and purpose of the treasurer's daily cash blotter.

LABORATORY MATERIAL

Exercise No. 244

The Balance Sheet of the Smith Steel Company on March 1, 19..., is as follows:

SMITH STEEL COMPANY

BALANCE SHEET, MARCH 1, 19....

Assets			*Liabilities and Capital*		
Land	59,748	80	Preferred Stock	100,000	
Buildings	69,461	74	Common Stock	200,000	
Equipment	130,214	29	Bills Payable	13,300	
Organization Expense	14,990	74	Accounts Payable	42,569	95
Unexpired Insurance	172	33	Payroll Accrued	1,229	74
Cash	3,472	88	Interest Accrued	311	
Bills Receivable	934		Reserve for Bad Debts	1,153	41
Accounts Receivable	11,939	98	Reserve for Depreciation of Buildings	2,680	59
Stores	15,357	15	Reserve for Depreciation of Equipment	11,732	48
Goods in Process	2,804	04			
				372,977	17
			Deficit	63,881	22
Total Assets	309,095	95	Total Liab. and Capital	309,095	95

The Jones Steel Company is contemplating the purchase of the common stock of the company and requests you to make an examination of the records and accounts and state what in your opinion is the correct book value of the common stock. Your examination discloses the following:

1. A mortgage of $25,000.00 is outstanding against the land. This has been subtracted from the book value of the asset. The book value of the Land account was increased $40,000.00 above cost two months ago based upon an estimate of the directors as to its present value. Your investigation convinces you that the present value of the land is not in excess of its cost.

2. The company was organized ten years ago and organization expenses of $14,990.74 have been carried on the books since the time of organization. You decide that this item should have been written off during the early life of the corporation.

3. You discover liabilities of $2,100.00 which are not on the books.

4. There is a provision in the charter of the company that the preferred stock of the company has a preference as to assets to the amount of its par value. You decide, therefore, that in determining the book value of its common stock, the preferred stock at par value must be subtracted from the net worth.

INSTRUCTIONS: 1. Prepare a Balance Sheet in proper form, showing the financial condition of the company as of March 1, after giving effect to the foregoing adjustments.

2. State what you think to be the proper book value of the common stock.

Exercise No. 245

The treasurer of the Frazer Manufacturing Company finds that the losses from bad debts are increasing rapidly each year. He decides that this is due to the lack of adequate credit and collection procedure. He requests you to investigate and recommend a procedure which will provide an effective control of credit and collections. From your examination you learn the following:

1. There is not a separate credit department. An assistant to the treasurer is responsible for the passing on sales orders and securing collections of unpaid accounts. He has an inadequate staff of assistants and has no standardized procedure by which to exercise control of either credits or collections.

2. Orders are received during the year from approximately 20,000 customers. Seventy-five per cent. of the orders received are from former customers and the remainder from new customers.

3. Statements are sent to all customers on the first day of the month with the agreement that payment is to be made on or before the fifteenth of the month.

INSTRUCTIONS: Write a report to the treasurer covering the following:

1. The need for a well-organized credit department.
2. The functions of this department.
3. The procedure to be followed in granting credit.
4. The procedure to be followed in making collections.

Exercise No. 246

You are credit manager of the Crawford Manufacturing Company. An order is received from Hodge & Taylor, a partnership engaged in manufacturing operations. At your request for information with reference to their financial condition, they submit the statement, as shown on page 1047.

HODGE & TAYLOR

BALANCE SHEET, JUNE 30, 19....

Assets		*Liabilities and Capital*	
Cash	10,000	Accounts Payable	54,000
Real Estate (Factory)	30,000	Bills Payable	140,000
Machinery and Tools	15,000	A. C. Hodge, Capital	36,000
Raw Materials	18,000	E. R. Taylor, Capital	12,000
Goodwill	9,000		
Accounts Receivable	160,000		
Total Assets	242,000	Total Liab. and Capital	242,000

INSTRUCTIONS: 1. Write a letter to Hodge & Taylor containing the following:

1. Questions you desire answered with reference to the items on the statement they have submitted.
2. Request for such additional information as you need to know.

Exercise No. 247

The bookkeeper of the Torr Manufacturing Company is unable to obtain his Trial Balance, the debit total being $7,600.00 larger than the credit total. You are requested by the treasurer to determine the cause for his difficulty. Upon investigation you discover the following errors:

1. The Accounts Receivable column on the debit side of the cash book is underfooted by $200.00.

2. The total of the Sales Discount column amounting to $1,680.00 has been posted to the credit of the Sales Discount account, and the total of the Purchases Discount column amounting to $2,780.00 has been posted to the debit of the Purchases Discount account.

3. The balance of cash on hand at the beginning of the month was $6,400.00, and this has been included in the total of the cash receipts column and posted to the debit of the Cash account.

4. A check for $200.00 drawn in payment of an invoice has been entered as a collection on the debit side of the cash book and posted to the credit of Accounts Receivable.

5. Cash sales for $1,200.00 have been entered in both the sales record and the cash book. They have been credited to Sales from each record, but the debit on the sales record has not been posted.

6. Goods returned by customers amounting to $2,000.00 have been entered as purchases and posted accordingly.

INSTRUCTIONS: Draft journal entries to correct these errors.

Exercise No. 248

The Davies Manufacturing Company has an outstanding capital stock of $2,000,000.00, one-half of which is 6% cumulative preferred and one-half common. The by-laws require that upon the payment of a dividend to the common stockholders a reserve shall be set up equal to 10% of the dividend, and that after the common stockholders receive a dividend equal to that paid to preferred stockholders, one-half of the remaining surplus shall be carried to the reserve until it amounts to $250,000.00.

On December 31, 19. . ., the Surplus account shows a debit balance of $200,000.00. Accordingly the preferred dividends for the year are passed. The Statement of Profit and Loss for the following year shows a net income for the year of $540,000.00.

INSTRUCTIONS: Draft journal entries to show disposition of profit of $540,000.00, assuming that dividends to both preferred and common stockholders are declared but not yet paid.

Exercise No. 249

Meade & Company sold to Marshall & Lyon merchandise invoiced at $3,000.00, terms 2 10, n/30. Marshall & Lyon did not take advantage of the discount, but at the end of the thirty days offered in settlement cash $1,000.00 and two notes for $1,000.00 each, payable in sixty and ninety days respectively. The notes bear interest at 6%. Meade & Company accept this settlement. At the end of thirty days they discount the notes at the First National Bank at 6%.

Marshall & Lyon pay the sixty-day note at maturity. At the maturity of the ninety-day note they offer Meade & Company a new thirty-day note with interest at 6% for $500.00, and a check for the balance of the $1,000.00 note plus interest, and request them to take up the $1,000.00 note at the bank.

Meade & Company agree to this and take up the ninety-day note. They immediately discount the $500.00 note at the First National Bank, rate of discount 6%. Marshall & Lyon pay the thirty-day note at maturity.

INSTRUCTIONS: Make the journal entries to show the effect of the foregoing transactions on the records of Meade & Company.

CHAPTER LXVIII

ACCOUNTING FOR BRANCHES

Reasons for Establishing Branches

Branches are established because it is thought that one or more of the following advantages may be obtained from their use:

(1) It is easier to keep in touch with the trade and the activities of competitors if a firm has a local organization in the field than if it depends on the reports of independent jobbers or retailers who handle its goods.

(2) If the branch carries a stock of merchandise, deliveries to customers can be made more quickly from the branch than from the general office of the company.

(3) It may be possible to save delivery expense by shipping in carload lots to the branch and delivering in small lots to the customer from the branch stock. Lower rates can be obtained on the carload lots than can be obtained on the smaller shipments. If the customer is a considerable distance from the place of original shipment, a considerable saving may be effected by this procedure. In a business where it is the custom for the vendor to pay transportation charges, this is an important consideration. If the purchaser pays the freight, its lower amount aids in selling.

(4) If goods are marketed through an agent or independent firm, the goodwill of the customers is apt to attach to the agent or firm rather than to the product sold. If for any reason the agent or firm ceases to handle the goods of the wholesaler or manufacturer, the latter looses the benefit of the goodwill built up by the former. If the manufacturer or wholesaler establishes a branch, he has an opportunity to retain the goodwill established by the branch.

(5) By establishing branches it may be possible to obtain the profit which the agent or jobber would otherwise obtain.

Organization for Branch House Control

The organization for branch house control depends upon the nature of the operations carried on by the branch. One of the conditions described in the following paragraphs may exist.

(1) In some businesses branches are established which act only as sales agencies. Their chief function is to take sales orders which they forward to the general office for approval. If the orders are approved as to terms, prices and credit by the general office, it makes shipment to the customer. The customer is invoiced from the general office and collections are made by it; consequently the accounts receivable and sales record are kept at the general office. Under these conditions it is necessary to have only representatives of the sales department at the branch. There will be a branch manager who will have supervision of the salesmen at the branch. The branch manager, in addition to acting as supervisor of the other salesmen, spends a considerable part of his time in a sales capacity. He is under the control of and reports to the head of the sales department. The only executive of the company who has any control of the branch, other than the sales manager, is the treasurer, who exercises supervision of the petty cash fund which it maintains.

(2) The branch, though not maintaining an inventory, may invoice customers and make collections. In this case there must be a representative of the credit department at the branch who will pass upon the credit standing of the customer. The branch manager may act in this capacity, or he may delegate this duty to an assistant. In any case, the one acting in this capacity is under the supervision of the general credit manager. If the branch makes collections, it will exercise custody of the funds received under the supervision and control of the treasurer.

(3) The branch may maintain an inventory from which shipments are made to customers. It may maintain a sufficient inventory to fill all orders, or it may keep in stock only certain classes of merchandise and forward orders for the remaining classes to the general office for shipment. It may receive all of its inventory through the general office, or it may be authorized to purchase all or part of it from outside vendors. If an inventory is maintained, the branch is responsible to the merchandise manager, the controller, or other officer who has jurisdiction of inventories, for its proper maintenance and for securing a satisfactory turnover. If purchases are made from outside vendors, these must be subject to the control of the general purchasing agent or merchandise manager.

As the activities of the branch increase, its clerical operations multiply and the number of its office employes grows larger. To promote efficiency and economy, it is desirable that a standardized office procedure be developed. To this end the office operations of each branch are placed under the supervision of the gen-

eral office manager. If accounting records are maintained at the branch, these will be under the direction of the controller or the general auditor.

As the operations of the branch increase with the consequent increase of responsibility, it comes under the control of all the principal executives of the company. Since the primary function of the branch is to assist in the marketing of the product of the business, the branch manager is usually under the line control of the head of the sales department. He is under the functional control of the other executives who prescribe the procedures with reference to the activities relating to their departments and delegate to him the enforcement of these procedures. In some cases there may be a manager of branch houses who is the immediate superior of the branch managers. He may report to the head of the sales department or direct to the president.

This discussion has dealt with branches used for mercantile purposes. A business may have two or more factories which it uses in the production of its commodity. These factories are not branches in the strict sense of the term, but rather separate units of the company. Usually each factory is under a works manager or superintendent who reports to the head of the production department or to the president. With this exception the control exercised over the factory by the general officers of the company is very similar to that exercised over a sales branch.

Methods of Branch Accounting Control

The methods of accounting used for branches may be classified as follows:

(1) No accounting records except those of a memorandum nature are kept at the branch. The books of original entry and the ledger records for recording the branch transactions are maintained at the general office. If only a few branches are maintained and the transactions they perform are not too numerous, their transactions may be entered in the general records of the home office. For example, the sales of the branches and of the general office may all be entered in the same sales record; the cash transactions may all be entered in one cash record; likewise, purchases in one purchase record, and miscellaneous transactions in one journal. In this case only one ledger will be kept and a controlling account will be maintained in it for each branch. If the branches are numerous and their transactions large in number, separate records of original entry and a separate ledger will be maintained for each branch. The branches will make reports to the general office, as the basis for its entries.

(2) The branch makes all entries of original record and forwards to the general office summaries of the transactions performed. For example, the branch records all sales made and at the end of the month sends a report to the general office, showing the total to be debited to Accounts Receivable and credited to Sales. Similar reports will be made for purchases, cash receipts, and cash disbursements. The journal entries for the month will be reported individually. The general office may post the summaries sent by the branches to individual ledgers or direct to the general ledger. When this method is followed, the periodic summaries are made on journal vouchers and these are filed in loose-leaf binders and used as posting mediums.

(3) The branch maintains books of original entry and also a complete ledger. In short, it has a complete accounting system. On the ledger there will appear a controlling account with the general office which takes the place of the customary proprietorship accounts. On the ledger of the general office there will be a similar controlling account for each branch. Periodic reports, usually monthly, are made to the general office, and from these reports entries are made in the general records to adjust the controlling account maintained with the branch.

It should be understood that the foregoing classification of branch accounting methods is not intended to be arbitrary. In any specific business, modifications will be found, and in many cases part of the accounting system will be centralized at the general office and other parts of it will be centralized at the branch. A better comprehension of the procedures which may be used may be obtained through a discussion of the methods of handling the following: (a) cash; (b) purchases; (c) sales; (d) expenses; (e) accounts receivable; (f) accounts payable.

Cash

In nearly all cases the branch is given a *working fund* which is sufficient to meet its needs for a limited period of time. It reports its disbursements to the general office when it needs additional funds, and the general office sends it a check for the amount of its disbursements. This will bring the fund back to the original amount. In short, the working fund is operated in the same manner as a petty cash fund.

If the branch records are maintained at the general office, the branch will make a duplicate record of its cash disbursements on loose-leaf sheets designed by the general office. When the branch needs additional funds, it will forward the original copy of its cash disbursements record with the paid vouchers attached, to

the general office. The general office will file these sheets in a binder and use them as its cash records for the branch. If the branch maintains its own accounting records, it may forward a copy of its disbursements record with attached vouchers to the general office, or a representative of the general office may perform a periodic audit of the branch records.

If the general office collects the accounts receivable of the branch, the only cash receipts of the latter will be the advances from the general office. If the branch collects its accounts receivable, the receipts therefrom may be deposited in a local bank to the credit of the home office and a copy of the daily deposit slip forwarded to the treasurer. If the records of original entry for the branch are kept at the general office, the branch will make a duplicate copy of cash receipts on a loose-leaf form designed by the general office and will forward the original of this copy periodically, usually monthly. The general office will file the record of cash receipts submitted by the branch and use it as a posting medium to the branch ledger. If the branch maintains records of original entry and the general office maintains the branch ledger, the former will forward periodically a summary of cash receipts on a standard journal voucher.

Purchases

Various conditions may exist with reference to purchases:

(1) The general office may ship from its stock all merchandise sold by the branch. In this case the branch has no responsibility except to verify the amount received. If the branch maintains records of original entry, it will make the appropriate entry in its records to debit Inventory or Purchases and credit General Office. This entry will be made from the invoice received from the general office. If the general office maintains the branch records of original entry, the branch will approve the invoice and send it to the general office for entry.

(2) The general office may make the purchase for the branch and also make payment of the invoice. When this practice is followed, the general office almost invariably makes the original record for purchases. The branch reports to the general office the amount of merchandise received and the latter makes all entries. If the branch maintains the original record, the general office approves the invoice and sends it to the branch for record.

(3) The general office makes the purchase for the branch, but the latter pays the invoice. In this case, the branch may

(a) enter the invoice in its records and post it at the end of the month; (b) enter it in the records and send a summary of all purchases made to the general office at the end of the month; or (c) approve the invoice and forward it to the general office to enter. The method of accounting employed will determine which method is to be followed.

(4) The branch may purchase its merchandise and pay for same. In this case it may follow any of the procedures given in (3).

Sales

If the branch does not invoice its customers but forwards all orders to the general office, it has no responsibility for the recording of sales. If it invoices its customers, it may (a) enter the sales invoice and post to ledger accounts, if it maintains a complete accounting system; (b) enter the invoice in the sales record and make a summary report to the general office; (c) approve the invoice and forward it to the general office for entry if no accounting records are kept at the branch.

Expenses

The branch usually pays all its operating expenses, although in some cases salaries are paid from the general office. These expenses are recorded in the cash disbursements record and posted from there to the ledger either at the branch or the general office, depending on the method of accounting employed.

Accounts Receivable

If the branch collects its accounts receivable, it will maintain an accounts receivable ledger. A customer's account will be debited from a copy of the sales invoice and will be credited from the "remittance slip" which accompanies the remittance of the customer or a "settlement sheet" prepared by the company when the remittance is received. If the accounts receivable are collected by the general office, the accounts receivable ledger will be maintained at the general office. The branch will forward a copy of the sales invoice to the general office for entry in the accounts receivable ledger.

Accounts Payable

If the branch pays its accounts payable, it will maintain an accounts payable ledger or an unpaid voucher file. If its accounts payable are paid by the general office, it will forward its invoices payable to the general office and the accounts payable record will be kept there.

Branch House Reports

The reports made for the use of the branch manager and the executives of the company depend upon the nature of the operations of the branch. To indicate the nature of these reports we will discuss briefly the following:

(a) Monthly Balance Sheet.
(b) Monthly Statement of Profit and Loss.
(c) Monthly Expense Analysis.
(d) Monthly Inventory Report.

THE CHICAGO TRADING COMPANY
KANSAS CITY BRANCH
BALANCE SHEET, DECEMBER 31, 1926

Assets					
CURRENT ASSETS:					
Cash		26,320	20		
Notes Receivable		47,987	41		
Accounts Receivable:					
Customers	187,420.01				
Others	3,642.84	239,050	26		
Merchandise Inventory		402,002	20		
Consigned Merchandise		12,137	80		
Total current assets				679,510	46
FIXED ASSETS:					
Furniture and Fixtures				3,784	29
DEFERRED CHARGES:					
Prepaid Insurance		47	22		
Prepaid Taxes		354	91		
Advances to Salsmen		550			
Doubtful Accounts Receivable		4,336	69		
Total deferred charges				5,288	82
Total				688,583	57
Liabilities					
CURRENT LIABILITIES:					
Accounts Payable		1,418	33		
Salaries and Wages Payable		812	50		
Total current liabilities				2,230	83
THE CHICAGO TRADING COMPANY				686,352	74
Total				688,583	57

Illustration No. 180, Balance Sheet of a Branch

Monthly Balance Sheet

The assets and liabilities of the branch are usually not numerous but are of sufficient importance to merit a report. The standard form of Balance Sheet may be used for this purpose. The difference between the assets and liabilities of the branch shows the investment of the company in the branch and is usually shown under the title of "General Office Account." Illustration No. 180 shows a Balance Sheet for a branch.

There are but few special features of the branch Balance Sheet. The merchandise inventory shown on the Balance Sheet of the branch is usually valued at the same price at which goods are billed by the home office to the branch, which is frequently higher than cost. In all cases where this inventory valuation is not on the basis of cost or market value, whichever is the lower, a reserve will be set up on the books of the home office sufficient to reduce the inventory to its proper valuation. Upon consolidation of the Balance Sheet of the branch with that of the home office, this reserve will be applied as a deduction from the inventory and the inventories of the home office and the branch inventory will be carried net in the consolidated Balance Sheet.

The consigned merchandise is sometimes valued at selling price. In this case another reserve will be set up on the home office books to reduce it to a proper carrying value.

The account with the Chicago Trading Company represents the value of the assets included on the branch Balance Sheet less the liabilities of the branch, or the amount for which the branch is liable to the home office. This item is a credit on the branch Balance Sheet but will appear as a debit item on the books of the home office, where goods, money advances and other items have been charged and credited respectively to the branch as the transactions arose.

Monthly Statement of Profit and Loss

A separate Statement of Profit and Loss is prepared for each branch for the use of the branch manager and the executives of the company. The standard form as illustrated in Chapter LVIII is satisfactory. For the use of the executives of the company, it is useful to have prepared summary reports which show for all branches comparative data with reference to sales, selling expense, and net profits. These reports may be similar in form to Illustrations Nos. 147–154.

Monthly Expense Analysis

This report will show in comparative form the expenses of the month classified under the principal kinds of expenses incurred, such as selling, accounting, general administrative, advertising,

delivery, etc. The report may be ruled as in Illustration No. 181 to show the expenses as follows: (1) this month; (2) last month; (3) per cent of increase or decrease; (4) average to date this year; (5) average to date last year.

MONTHLY EXPENSE ANALYSIS

Nature of Expense	This Month		Last Month		Per Cent Increase or Decrease	Average to Date this Year		Average to Date Last Year	
Selling....................	......	...	......	...	....	......	...	......	...
Office....................	......	...	......	...	....	......	...	......	...
Accounting................	......	...	......	...	....	......	...	......	...
Advertising................	......	...	......	...	....	......	...	......	...
Delivery..................	......	...	......	...	....	......	...	......	...
Stores....................	......	...	......	...	....	......	...	......	...
....	......	...	......	...	....	......	...	......	...
Total....................	......	...	......	...	....	......	...	......	...

Illustration No. 181, Monthly Expense Analysis

Monthly Inventory Report

The monthly inventory report will show the inventory classified under the principal classes of merchandise handled. It may be ruled as in Illustration No. 182, to show the following: (1) inventory at beginning of month; (2) receipts during month; (3) total to account for; (4) sales during month at cost; (5) inventory at end of month; (6) orders outstanding; (7) quarterly turnover.

MONTHLY INVENTORY REPORT

Merchandise Group	Inventory Beginning of Month		Receipts During Month		Total to Account for		Sales During Month at Cost		Inventory at End of Month		Orders Outstanding		Quarterly Turnover
....	......	...	......	...	......	...	......	...	......	...	......	...	......
....	......	...	......	...	......	...	......	...	......	...	......	...	......
....	......	...	......	...	......	...	......	...	......	...	......	...	......
....	......	...	......	...	......	...	......	...	......	...	......	...	......
....	......	...	......	...	......	...	......	...	......	...	......	...	......
....	......	...	......	...	......	...	......	...	......	...	......	...	......
....	......	...	......	...	......	...	......	...	......	...	......	...	......
Total....	......	...	......	...	......	...	......	...	......	...	......	...	......

Illustration No. 182, Monthly Inventory Report

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The Warner Company for many years has marketed its product through jobbers. It decides to discontinue this policy and to establish branches through which to sell its merchandise. Explain the possible advantages which the company may obtain from this method.

— 2 —

The branches of the X Corporation receive orders from customers which they forward to the general office for shipment. The general office also invoices all customers and makes collections therefor. The branches of the Y Corporation maintain inventories, invoice their customers, and make collections. Explain the control which the general officers of the company exercise over the activities of the branches in each of the foregoing cases.

— 3 —

The Warner Company, after the establishment of the branches referred to in Question 1, desires to establish a proper accounting control of its activities. There is some difference of opinion among the executives of the company as to the accounting procedure which should be followed. Explain the possible methods of accounting which the company may adopt.

— 4 —

On your recommendation the Warner Company determines on the following:

(a) That the branch ledgers are to be maintained at the general office.

(b) That the detailed records of original entry are to be maintained at the branches

(c) That each branch is to have a working fund of $10,000.00, to be replenished as often as necessary by the general office.

(d) That customers are to be invoiced by the branches and collections made by them.

(e) That all merchandise sold by the branches will be purchased by the general office, but all payments for merchandise purchased from outside vendors are to be made by the branches.

Under these conditions, explain how the cash receipts and disbursements of the branches will be recorded and controlled.

— 5 —

The general office of the Warner Company purchases material from the Ames Company, of Worcester, Massachusetts, to be shipped to the New York branch. Trace the procedure from the time the order is placed until the final entries are made on the records of the general office.

— 6 —

The Chicago branch of the Warner Company receives an order from a customer. Trace the procedure from the receipt of the order until the final entries are made on the records of the general office.

— 7 —

The general office of the Blank Corporation has followed the practice of making the purchases for its branch offices as well as paying the invoices. The company decides to permit the branches to make these purchases and pay their invoices. Explain the changes in procedure which will be required.

— 8 —

The branches of the King Manufacturing Company maintain a complete set of records. The general office supplies the branches with all their merchandise. When shipments are made, duplicate invoices are prepared. One copy is used as the basis of the entries on the records of the general office. The other copy is forwarded to the branch, and, after being verified as to quantity on the receipt of the goods, serves as a basis of the entries on the branch records. You have before you a Trial Balance of the general ledger of the general office and of the general ledger of the New York branch, which are taken on the same day. The former shows the New York Branch account to be $1,800.00 larger than the latter shows the General Office account. Explain a possible reason for this discrepancy.

— 9 —

The new treasurer of the Wharton Construction Company finds that the branches of the company collect their accounts. He desires to have the collections made from the general office. Explain the changes in procedure which must be made to accomplish this.

— 10 —

"The branch usually pays all its operating expenses, although in some cases salaries are paid from the general office." Why may salaries be paid by the general office and not other operating expenses?

— 11 —

In some companies the accounts receivable records are kept at the branches and collections made there, but the accounts payable record is maintained at the general office and all payments made by it. Can you explain why the treatment of accounts receivable should be different from that of accounts payable?

— 12 —

Mr. Hobson is general manager of the Hobson Manufacturing Company, which has numerous branches. What information will he desire to obtain with reference to these branches from the periodical reports?

— 13 —

In what way will a Balance Sheet of a branch differ from the Balance Sheet of the general office?

— 14 —

The manager of branches of the Hudson Manufacturing Company desires to have information monthly with reference to the expenses of each branch. Describe the content of a report that will answer his purposes.

— 15 —

He also desires a monthly inventory report. What value will this be to him? Explain the content of this report.

LABORATORY MATERIAL

Exercise No. 250

The Union Manufacturing Company has ten branches through which it markets its product. You are requested to devise a branch accounting system suitable to the needs of the company. By an investigation of the operating methods of the company you determine the following:

(a) That the branches maintain an inventory of merchandise sufficiently large to meet all the sales demands of their customers.
(b) That the branches secure all their merchandise from the factories of the home company.
(c) That the branches invoice customers and make all collections.
(d) That the branches pay all their expenses.
(e) That the branches maintain a cash fund of $10,000.00. This is replenished by the home office as often as necessary. All collections by the branches are deposited daily in a local bank to the credit of the general office.

After considering these facts you decide that it is desirable:

(a) That a separate accounting system be maintained for each branch; that branch ledgers should be maintained at the general office and the monthly reports prepared there; and that all records of original entry should be maintained at the branches.
(b) That the branches should submit monthly summaries which will serve as a basis for the posting mediums to the accounts.

INSTRUCTIONS: Prepare a report to the general manager of the company which explains the procedure to be followed in handling the following: (a) cash; (b) purchases; (c) sales; (d) expenses; (e) miscellaneous transactions; (f) accounts receivable; and (g) accounts payable.

Exercise No. 251

You are employed by James Long and Company, of New York City, to take charge of a branch store at Buffalo, New York. At the time you take charge of the store it has the following assets:

Merchandise Inventory...............	$2,500.00
Cash................................	100.00
Furniture and Fixtures...............	300.00

You are to receive a salary of $50.00 a month and ten per cent of the gross profits. During the year you pay for rent and other expenses of operating the store, $500.00. The goods shipped from the main store during the year amounted to $22,000.00, and your sales amounted to $30,000.00. At the end of the year the assets of the branch store, in addition to the cash, are as follows:

Merchandise Inventory	$1,900.00
Furniture and Fixtures	270.00
Accounts Receivable	500.00

You have remitted $17,000.00 to the home office in payment of merchandise received. You have drawn the amount of your salary, but have taken out no cash for your share of the profits.

INSTRUCTIONS: 1. Prepare a statement showing the net profits of the branch for the year.

2. Prepare a statement showing the cash due to the general office at the end of the year.

Exercise No. 252

The Kingston Manufacturing Company, of Chicago, establishes a branch office in St. Louis on January 1, 19.... The general office advances $5,000.00 in cash at the time the branch office is opened. During the first year the general office ships to the branch merchandise invoiced at cost $75,000.00. At the end of the year the records of the branch show the following:

1.	Sales for the Year An average gross profit of 25% has been made on these sales.	$60,000.00
2.	Rebates and Allowances on Damaged Goods	1,200.00
3.	Salaries and General Expenses Paid	4,500.00
4.	Freight Paid on Goods Received from Home Office	2,400.00
5.	Furniture and Fixtures Purchased	500.00
6.	Remittances to Home Office	34,000.00
7.	Uncollected Accounts Receivable	15,000.00

The only assets of the branch are cash on hand, inventory of unsold goods, uncollected accounts, and furniture and fixtures.

INSTRUCTIONS: 1. Prepare a statement to be submitted to the home office, showing the results of the branch operations for the year.

2. Set up the journal entries necessary to show the foregoing transactions on the branch ledger.

3. Post to accounts and close branch ledger by journal entries.

CHAPTER LXIX

ACCOUNTING FOR INVESTMENTS

Meaning and Purpose of Investments

Every business enterprise is organized to carry on certain operations with the expectation of obtaining profits as a result of these operations. To accomplish this end it is necessary that capital be available and that this capital be in the form most serviceable to the specific business. For example, capital may be invested in land, buildings, and equipment, which are used in the operations of the business. Some capital must be in the form of cash, and usually there will be a considerable amount represented by receivables and merchandise inventory.

In a properly managed business, the capital will be distributed among these various assets in accordance with its needs. Care will be taken to avoid the possession of too large a quantity of some assets and too small a quantity of others. For example, money which is needed to liquidate current liabilities will not be tied up in land, buildings, and equipment. Merchandise and materials will not be purchased beyond the variable needs of the business. To secure the proper use of the funds of a business is one of the most important functions of its management.

If a business is prosperous, profits will be made and the capital of the business will be increased thereby. From the profits, dividends will be declared, and capital, usually in the form of cash, will be used in their payment. Conservative management dictates that the profits in excess of a reasonable return on the investment of the stockholders be retained in the business. In most cases these profits are used in the expansion of the business. In some cases it may not be profitable to expand further, and it is necessary to use the funds derived from the profits in some other manner. Consequently they may be used to acquire assets in the form of *investments*. These consist of stocks and bonds of other companies or land and buildings not needed in the conduct of the business. Funds may be invested in such assets temporarily with the expectation that the assets will soon be sold, or they may be invested with the purpose of retaining these assets more or less permanently.

Characteristics of Good Investments

In the purchasing of investments which are to be held only temporarily, care should be exercised to secure those which will have three qualities: (a) security; (b) salability; and (c) a fair rate of income. It is evident that it is unwise for a business organized for non-speculative purposes to risk its surplus funds in uncertain enterprises. The funds are retained in the business in order that they may be available for future use when needed, consequently they must not be dissipated in speculation.

Since it is anticipated that these funds may be needed in the future operations of the business, it is desirable that they be placed in investments which can be readily sold at any time the funds may be needed. High-grade stocks and bonds can be sold on the Stock Exchange at any time. Of course their market value will fluctuate to some extent.

Finally, the business retains profits in the business which would otherwise be distributed to the stockholders with the consequent opportunity on their part of investing them profitably. It is incumbent upon the business, therefore, to use these funds so that they will result in a profit to the stockholders. In short, they should be invested so as to earn as high an income as possible, consistent with the safety of the principal.

Long-term Investments

It has been assumed in this discussion that stocks and bonds are purchased as a means of securing a profitable investment for surplus funds. This is usually true in the case of bonds, but stocks are often purchased not for the primary purpose of the income to be derived from them, but to exercise some control over the operations of the company whose stock is purchased. For example, a publishing company may purchase he stock of a printing company so it may exercise sufficient control of the latter to be treated as a preferred customer and obtain the execution of its printing contracts at any time. A company manufacturing machine tools may purchase the stock of a foundry to insure itself of a continuous supply of good castings. In other cases a company may purchase a controlling interest in the stock of one or more competitors in order to control their prices and thereby eliminate competition.

Real estate may be purchased when it is not needed for present use because it is expected that it will be needed in the future and it is feared it may be unobtainable at that time.

During the war, many firms purchased United States bonds, not because they desired them as an investment, but for patriotic reasons. These bonds appear on the Balance Sheets of many companies which have no other investments. Trust companies,

insurance companies, and similar institutions receive a considerable part of their income from their investments in stocks and bonds. The state laws usually restrict the investment of the funds of such institutions to certain kinds of securities.

Classification of Investments

For the purpose of the present discussion, investments may be classified as follows:

(a) Stocks
(b) Bonds
(c) Land and Buildings

The method of accounting for each of these will be discussed.

Accounting for Stocks

Stocks, regardless of the purpose for which purchased, should be recorded at the time of purchase at the cost price. The cost includes the purchase price plus brokerage fees and any other expense incurred incident to their purchase. In the case of a mercantile business, stocks are usually carried at cost regardless of the market price. If the market price is higher than cost, it is not proper to show the increase in value in the accounts, for this would result in the showing of a profit which has not been realized and may never be realized, since the stocks may decline in value before they are sold. If the market price is below cost, it is not necessary to show this decrease in market value and the consequent loss in the accounts if the decrease is deemed to be temporary and is not large in amount. If the decrease is regarded as permanent or is of large amount, it is desirable to write down the book value of the stock and show the loss resulting therefrom or to set up a reserve for the anticipated loss. Slight or temporary fluctuations may be ignored in the accounts, but shown on the Balance Sheet by inserting the market value in brackets immediately after the title of the asset. In a business dealing in stocks, such as a brokerage firm, it is customary to inventory those on hand at cost or market price, whichever is the lower.

If stocks of various businesses are owned, separate accounts should be kept for the stocks of each company. In the case of large holdings of stock, it is desirable to have a subsidiary ledger to contain particulars regarding the different classes of stock, which will support the controlling account on the general ledger.

The profits of a company are not subject to the control of its stockholders until dividends have been declared by the board of directors. It is customary, therefore, for the company holding stock not to take into consideration the earnings of the company which the stock represents until dividends have been de-

clared. After dividends are declared, they become a liability of the company declaring them, and therefore can be considered as an asset by the stockholders of the company. If some time elapses between the declaration of the dividend and its payment, a stockholder may enter the dividend as an asset on his records.

To illustrate: the X Corporation purchases $100,000.00 of the seven per cent cumulative preferred stock of the Y Corporation. The directors of the Y Corporation declare a dividend of seven per cent on January 15, payable on March 1. The X Corporation, receiving notice of this fact, makes the following entry:

	Dividends Receivable, Y Corporation.	7,000	
	Income from Dividends, Y Corporation..................		7,000

When the dividends are paid and the cash received by the X Corporation, the following entry is made:

	Cash............................	7,000	
	Dividends Receivable, Y Corporation..................		7,000

If the dividends are paid as soon as declared, the X Corporation will make but one entry by which it will debit Cash and credit Income from Dividends, Y Corporation.

If one corporation owns a controlling interest in another, it may be justified in taking on its books its share of the profits of the latter as soon as they are earned on the theory that, since it owns a controlling interest, it may secure a distribution of those profits when it desires. It is a more conservative practice, however, not to enter the profits on the records until their distribution has been directed by a declaration of dividends.

There is not unanimity of opinion as to the classification on the Balance Sheet of stocks owned. It is sometimes contended that, if the stocks are readily salable, they may be shown as a current asset on the theory that they may be easily converted into cash. It is thought better, however, to restrict current assets to those which not only *may*, but *will*, in the normal course of business, be converted into cash. Since there is no assurance that stocks will be sold, it is a better plan to show them under the separate heading of "Investments" with a sufficient description to indicate their nature. For example, on the Balance Sheet of the X Corporation the investment in the Y Corporation will be shown as follows:

	INVESTMENTS:			
	Y Corporation, 7% Cumulative Preferred Stock.............	100,000		

Accounting for Bonds

From the point of view of accounting, bonds may be divided into two general classes: (1) those purchased as a means of investing temporarily surplus funds, with the expectation that they will be sold within a limited time after their purchase; (2) those purchased for long-time investments and which it is intended to retain until their maturity.

The first class should be recorded at cost price in the same manner as stocks. This cost will include the purchase price plus the charges incurred incident to their purchase, such as brokerage fees, stamp tax, and so forth. When the bonds are sold, the Bond account will be credited with their selling price and the balance of the account will show the net profit or loss on the transaction.

In recording the second class of bonds, a different procedure is necessary. They are not purchased for resale, but to retain until their maturity. Since the par value is the amount to be realized at maturity, it is necessary that the bonds be recorded at this amount in the accounts.

Bonds may be purchased at par; above par, when they are said to be bought at a *premium;* or below par, when they are said to be bought at a *discount*. Since they must appear in the accounts at par at the time of maturity, the question arises as to the disposition of the premium when they are purchased above par, or of the discount when they are purchased below par. A bond for $1,000.00, payable twenty years hence, if purchased at $1,100.00, will only produce $1,000.00 at maturity. The premium of $100.00 will be lost. On the other hand, the same bond purchased for $900.00 will produce $1,000.00 at maturity, and there will be a gain of $100.00. In the case of the bond purchased at a premium, if no steps are taken to prevent, upon maturity the premium of $100.00 will be charged to the Profit and Loss account. In the opposite case, the discount of $100.00 will be credited to Profit and Loss. The better practice in both these instances dictates spreading either the discount or premium over the remaining life of the bond. The method by which this is done may be shown best by means of an illustration.

The Brown Corporation purchases one hundred ten-year 5% bonds of the Smith Company at $90.00 each. Since the bonds have a par value of $100.00 and the Smith Company is regarded as thoroughly solvent and reliable, the question arises as to why the bonds may be purchased at $90.00 each. Investigation shows that the current rate of interest is 6%, while the bonds bear only 5% interest, consequently, the bonds sell for only $90.00, since it is estimated that at this price approximately the same return will be obtained on the investment as if $100.00 was

paid for bonds bearing 6% interest. The following calculations will show the basis for this conclusion:

(a) If the 5% bonds are purchased at $90.00 each:

OUTLAY:	
100 bonds at $90.00	$ 9,000.00
RECEIPTS:	
Yearly interest—$500.00 for 10 years	$ 5,000.00
Received in payment of bond at maturity	10,000.00
EXCESS OF RECEIPTS OVER OUTLAY	$ 6,000.00

(b) If the same bonds bearing 6% interest were purchased at par value of $100.00 each:

OUTLAY:	
100 bonds at $100.00	$10,000.00
RECEIPTS:	
Yearly interest—$600.00 for 10 years	$ 6,000.00
Received in payment of bond at maturity	10,000.00
*EXCESS OF RECEIPTS OVER OUTLAY	$ 6,000.00

It can be seen from the foregoing illustration that the Brown Corporation is willing to take less interest each year on the bonds bought at a discount because it expects to receive an excess over the cost price at the maturity of the bonds. In both cases, however, the total amount received as a result of the investment is the same, and it seems desirable that these receipts be distributed evenly over the life of the bonds rather than show a profit of $1,000.00 for the year of their maturity. This may be accomplished by the following procedure:

When the bonds are purchased, the following entry is made:

Bonds, Smith Co., 10-Year, 5%	10,000	
Cash		9,000
Discount on Bonds Purchased		1,000

Each year when the $500.00 cash is received, the following entry is made:

Cash	500	
Discount on Bonds Purchased	100	
Bond Interest Earned		600

*In this illustration the question of compound interest is ignored, since the purpose is to illustrate the principles involved rather than calculations by which exact results are obtained. In practice, bond tables are frequently used in determining the value of bonds at various rates of interest.

By this method the accounts will show each year an earning of $600.00, and at the end of ten years the discount on bonds will have been written off and the bonds will appear in the accounts at their par value of $10,000.00. When payment is received, Cash should be debited for $10,000.00 and Bonds credited for the same amount. On the Balance Sheets made during the life of the bonds, the par value of the bonds may be shown with the discount subtracted therefrom and the net amount extended in the asset column.

When bonds are purchased at a premium, exactly the reverse condition to that illustrated in the foregoing discussion exists. For example, if the bonds of the Smith Company bear interest at 7%, they may sell at $110.00 each. In this case the purchaser will receive a high rate of interest each year, but will receive $1,000.00 less than the cost of the bonds at the date of maturity. This difference between the purchase price and the amount received in payment should not be shown as a loss of the year when the bonds mature, but should be deducted from the interest received each year. The entries for recording and disposing of the premium paid in the foregoing illustration are as follows:

At the time of purchase the following entry will be made:

	Bonds, Smith Co., 10-Year, 5%	10,000	
	Premium on Bonds Purchased........	1,000	
	Cash..........................		11,000

When the interest is received each year, it will be recorded as follows:

	Cash..............................	700	
	Premium on Bonds Purchased....		100
	Bond Interest Earned...........		600

By this means the true earning on the investment will be shown each year, and at the end of ten years the Premium account will have been written off and the bonds will appear at par, which is the amount that will be received in payment for them. On the Balance Sheets made during the life of the bonds, the par value of the bonds should be shown with the premium added and the total carried into the asset column.

It is desired to emphasize again that the figures used in the foregoing illustrations are only approximately correct. It is not desired to complicate the principles involved by the introduction of the calculations which would result from the use of bond tables showing the exact figures. The student will notice one apparent result from using the approximate instead of the exact figures, since, when the bonds are purchased at a discount, only

$9,000.00 is invested, whereas when they are purchased at a premium, $11,000.00 is invested. Yet the earnings are the same in each case. If exact figures were used, the earnings would be smaller for the smaller investment.

Some business firms use the approximate figures such as are used in these illustrations, instead of using the more exact figures obtained from the bond tables.

The market price of bonds held as a permanent investment is not recognized in the accounts. Since they are not to be sold, the market has no effect on their value to the firm. On the Balance Sheet the market price may be shown by being written in brackets immediately after the title of the account.

The foregoing statements are based on the assumption that there is no doubt of the solvency of the issuing company and consequently no doubt of the payment of the bonds at maturity. It will be understood that if the market price is below the book value, as the result of the financial condition of the issuing company, this may necessitate the changing of the book value of the bonds or the setting up of a reserve to provide for a probable loss on them because of a failure of the company to pay in full. Since bonds are usually secured by a lien on the property of the issuing company, they will usually be paid in full even though the company becomes insolvent.

If bonds of different companies are held, a separate account should be kept with the bonds of each, and they should be shown as separate items on the Balance Sheet. Bonds held for permanent investment, like bonds held for temporary purposes, are shown on the Balance Sheet under the title of "Investments" with a sufficient description to indicate clearly their nature. This description should correspond with that shown in the foregoing entries.

Premium and Discount on Bonds Issued

The foregoing discussion has explained the method of handling premium and discount on bonds purchased and held as an investment. On the records of the company issuing the bonds, entries are made which are just the reverse of those made on the records of the purchaser. If the Smith Company issues one hundred ten-year 5% bonds to the Brown Corporation at $90.00, the entries on the record of the former will be:

	Cash	9,000	
	Discount on Bonds Issued	1,000	
	Bonds Payable, 10-Year, 5%		10,000

At the time of paying the yearly interest, the entry shown on the following page will be made.

Bond Interest Paid..................	600	
Cash.........................		500
Discount on Bonds Issued........		100

By this procedure the discount on bonds will be written off over the life of the bonds, and each fiscal year will bear its share of the discount. On the Balance Sheet prepared during the life of the bonds, the balance of the account with Discount on Bonds Issued will be shown as a deferred charge to expense.

If the Smith Company issues one hundred bonds bearing interest at 7%, and sells them for $110.00 each, the entry at the time of sale will be:

Cash.............................	11,000	
Bonds Payable, 10-Year, 7%.....		10,000
Premium on Bonds Issued........		1,000

At each interest date the entry will be:

Bond Interest Paid..................	600	
Premium on Bonds Issued...........	100	
Cash.........................		700

By this procedure the premium on bonds will be written off over the life of the bonds, and each fiscal year will receive the benefit of its proper share of the premium. On the Balance Sheets prepared during the life of the bonds, the balance of the account with Premium on Bonds Issued will be shown as a deferred credit to income. In the foregoing illustrations, the factor of compound interest has been disregarded in the same manner and for the same reason as in the discussion of the treatment of premium and discount on bonds purchased.

Accrued Interest on Bonds

At the time bonds are purchased, there may be interest accrued on them which is not yet due and the purchaser may be charged for this. To illustrate, a 6% bond with interest payable yearly on December 31 may be purchased at its par value of $1,000.00 on June 30. One-half of a year's interest, amounting to $30.00, is accrued at this time. The purchaser, therefore, will be required to pay $1,030.00 for the bond. He will enter the purchase as follows:

6% Equipment Bond, Penn. R. R....	1,000	
Accrued Interest on Bonds...........	30	
Cash.........................		1,030

At the end of the year the purchaser will receive $60.00 interest and he will record this as shown on page 1072.

	Cash	60	
	Accrued Interest on Bonds		30
	Interest Earned on Bonds		30

This shows that one-half of the amount received is an earning of the year and the remainder is a return of the capital invested.

If the date of payment of interest does not coincide with the close of the fiscal period, the accrued interest on bonds at the end of the fiscal period must be shown as an asset on the Balance Sheet and as income earned on the Statement of Profit and Loss. Accrued interest is explained in Chapter XXXII.

Investment in Fixed Assets

It is rather unusual for a business to purchase fixed assets, such as land and buildings, in excess of its needs. Land is purchased under these circumstances more often than any other fixed asset, since it may be desired to hold it for future use when it is anticipated it will be needed because of contemplated expansion. Sometimes land and buildings are purchased because it is thought they will increase in value, and a profit can be made from their later sale. If income-producing property is purchased, no particular difficulties arise in accounting for it. It is recorded at cost and carried at cost less depreciation. All expenses incurred in connection with it are segregated in separate expense accounts, and all income derived from it is shown in separate income accounts. At the end of each fiscal period, a summary of the expenses and income is made to determine the net profit or loss for the period. This is shown on the Statement of Profit and Loss under the heading of "Other Income" if a profit, or under the heading of "Deductions from Income" if a loss.

If property, such as land, is purchased which is non-income-producing, there arises the problem of properly showing the charges incurred incident to its ownership. Taxes must be paid in any case and other charges may be incurred. It is usually regarded as proper to add these charges to the original cost of the land on the theory that the management must have considered these at the time the land was purchased and determined that a saving would be effected by purchasing it and paying these rather than to wait until it was needed and pay the market price at that time. The judgment of the management may have been incorrect, however, and it is not proper to increase the value of the asset far above its value because of this incorrect judgment. It may be better in some cases to show carrying charges on non-income-producing land as a debit to Profit and Loss or as a deferred charge to be spread over the years when the land becomes productive. If they are charged to Profit and Loss, they must be treated as deduction from income so as not to affect the showing of net profit from the regular operations of the business.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

The X Corporation has just been organized. Capital stock to the amount of $300,000.00 has been sold for cash. What factors should the company consider in investing these funds?

— 2 —

The earnings of the X Corporation during the third year of its operations are $60,000.00. Some of the directors desire to distribute all these earnings in dividends. What do you think of this policy?

— 3 —

If the X Corporation retains some of its earnings in the business, what disposition may it make of them?

— 4 —

The Brown Manufacturing Company uses high-grade steel castings in the manufacture of its product. It has purchased these castings during the past few years from the King Foundry Company. Recently a competitor of the Brown Company has been purchasing a considerable part of the product of the King Foundry Company, and this has caused the Brown Company some inconvenience in securing castings at the time they are desired. What procedure may the Brown Company follow to insure itself a satisfactory supply of castings in the future?

— 5 —

The A Corporation on January 1, 19.., purchases, for $80,000.00, stock of the B Corporation, which has a par value of $90,000.00. It pays brokerage fees of $100.00. Explain how this purchase should be recorded.

— 6 —

On December 31, 19.., the market price of this stock is $85,000.00. How would you treat this increase in market price in closing the books on this date?

— 7 —

The president of the A Corporation insists that the increase in market value of the stock is of importance to the bank and merchandise creditors of the firm and should be shown in the accounts and on the Balance Sheet. How would you answer him?

— 8 —

During the year the B Corporation earns large profits, as shown by its Statement of Profit and Loss, which is sent to the stockholders. On January 10 of the following year, the president of the A Corporation presents this Statement of Profit and Loss to his accountant and suggests that, as the A Corporation owns one-tenth of the stock of the B Corporation, it is entitled to show in its records one-tenth of the year's profits of that company. The accountant maintains that since the B Corporation has not declared a dividend, the A Corporation can not show any of the profits of the former in its records. What is your opinion?

— 9 —

On February 1, the board of directors of the B Corporation declares a six per cent dividend, payable on March 1. Explain the entries to be made on the records of the A Corporation on February 1 and on March 1.

— 10 —

The Rose Manufacturing Company invests surplus funds in the bonds of the Hydrex Corporation, which it plans to sell as soon as these funds are needed in the development of the business. Explain (a) how these bonds should be recorded at the time of purchase; (b) how they should be carried in the accounts while they are owned; and (c) the method of recording them when sold.

— 11 —

The Curry Corporation purchases the twenty-year $5\frac{1}{2}\%$ bonds of the Lewis Manufacturing Company. It plans to retain these bonds until maturity. The par value of the bonds is \$10,000.00, and they are purchased for \$9,000.00. Explain the entries to be made on the books of the Curry Corporation (a) when the bonds are purchased; (b) when the yearly interest is received; (c) when payment for the bonds is received.

— 12 —

Two years later the Curry Company purchases the twenty-year $6\frac{1}{2}\%$ bonds of the Baker Publishing Company. It plans to retain these until maturity. The par value of the bonds is \$10,000.00, and they are purchased for \$11,000.00. Explain the entries to be made on the records of the Curry Corporation (a) when the bonds are purchased; (b) when the yearly interest is received; (c) when payment for the bonds is received.

— 13 —

Explain the entries to be made on the records of the Lewis Manufacturing Company in connection with the bonds referred to in Question 11 (a) when the bonds are issued; (b) when the yearly interest is paid; (c) when the bonds are paid.

— 14 —

Explain the entries to be made on the records of the Baker Publishing Company in connection with the bonds referred to in Question 12, (a) when the bonds are issued; (b) when the yearly interest is paid; (c) when the bonds are paid.

— 15 —

Explain how the bonds of the Lewis Manufacturing Company will be shown on the Balance Sheet of the Curry Corporation three years after their purchase. Explain how these bonds will be shown on the Balance Sheet of the Lewis Manufacturing Company on the same date.

LABORATORY MATERIAL

Exercise No. 253

The Trial Balance of the Hodge Corporation on December 31, 19.., is as follows:

THE HODGE CORPORATION

TRIAL BALANCE, DECEMBER 31, 19....

Cash	6,000	
Notes Receivable	3,000	
Accounts Receivable	30,000	
Reserve for Bad Debts		1,000
Bonds, X Corporation, 20-Year, 5%	4,000	
King Motor Company, 6% Cumulative Preferred Stock	2,800	
Bonds, Y Corporation, 10-Year, 7%	8,000	
Premium on Y Corporation Bonds	900	
Discount on X Corporation Bonds		620
Furniture and Fixtures	2,000	
Reserve for Depreciation on Furniture and Fixtures		600
Buildings	32,000	
Reserve for Depreciation of Buildings		1,800
Land	24,000	
Notes Payable		4,000
Accounts Payable		8,000
Bonds Payable, 20-Year, 7%		30,000
Premium on Bonds Issued		2,100
Capital Stock, 7% Cumulative Preferred		50,000
Surplus		8,980
Sales		65,200
Purchases	50,000	
Operating Expenses (total of all accounts)	10,000	
Other Income		1,200
Deductions from Income	800	
	171,700	171,700

From an inspection of the accounting records and supporting documents, the following data is obtained:

1. Accrued interest on notes receivable, $60.00.

2. Estimated loss on bad debts, 1% of accounts receivable outstanding.

3. The bonds of the X Corporation were purchased for $3,200.00 five years previous to this date. The interest is payable semi-annually on December 31 and June 30. That for December 31 has been received but not yet entered.

4. The stock of the King Motor Company has a par value of $3,000.00. The present market value is $2,900.00. It appears on the books at cost. The fiscal year of the King Motor Company ends on November 30. The board of directors on December 20 declared the regular dividend on preferred stock, payable on February 1. The Hodge Corporation is notified of the declaration of the dividend on this date.

5. The bonds of the Y Corporation were purchased January 1 of the preceding year for $9,000.00. The interest is payable annually. The interest for the current year has not yet been received.

6. The yearly depreciation on furniture and fixtures is 10% and on buildings is 3%.

7. Accrued interest on notes payable, $100.00.

8. Accrued wages, $240.00; accrued taxes, $180.00.

9. The bonds were sold ten years ago this date at a premium of $4,000.00. The interest is payable semi-annually, and that for the half year ending on this date has not yet been entered.

10. The inventory on December 31 is $20,000.00. Inventory at beginning of the year was $15,000.00, and is shown as a debit to Purchases account.

INSTRUCTIONS: 1. Make the journal entries to record the foregoing adjustments.

2. Prepare a Balance Sheet and a Statement of Profit and Loss.

3. Prepare the journal entries to close the accounts.

Exercise No. 254

The United States Bond Holding Company performed, among others, the following transactions during the year:

Jan. 1. Issued twenty-year 5% bonds having a par value of $200,000.00. Bonds sold for $190,000.00. Interest is payable semi-annually.

20. Purchased $8,000.00 of the 7% cumulative preferred stock of the X Corporation for $7,800.00. Brokerage fees, $10.00.

30. Purchased $2,000.00 of the twenty-year 6% bonds of the King Corporation from the Brown Manufacturing Company for $1,900.00. These were largely to accommodate the Brown Corporation, and it is expected that they will be sold soon. Interest on the bonds is payable yearly on August 31. The purchase price of $1,900.00 included accrued interest.

Mar. 31. Purchased $5,000.00 of the twenty-year 6% bonds of the Jones Manufacturing Company at par plus accrued interest. The interest is payable semi-annually, December 31 and June 30.

June 30. Paid interest on bonds issued on January 1. Received semi-annual interest on the bonds of the Jones Manufacturing Company, purchased on March 31.

Aug. 31. Received yearly interest on bonds of the King Corporation, which were purchased on January 30.

Sept. 30. Sold bonds of the King Corporation at par value. No charge is made for the accrued interest.

Dec. 31. Paid interest on bonds issued on January 1. Received semi-annual interest on the bonds of the Jones Manufacturing Company, purchased on March 31.

INSTRUCTIONS: Make the journal entries to record the foregoing transactions.

Exercise No. 255

The Griffin Manufacturing Company purchases certain lots adjoining its manufacturing plant, together with the building which is situated on them. It contemplates that it will need these lots on which to extend its plant within two or three years and desires to obtain them now in order to prevent their purchase by someone from whom they may be unable to obtain them when they are desired. The company plans to tear down the building when the lots are needed.

The lots and buildings cost $6,000.00, and it is estimated that the building is worth $1,500.00. The building is rented for a warehouse at $400.00 a year. The taxes, insurance, and warehouse charges on the land and building are $100.00 a year. The building is depreciating at the rate of $200.00 a year.

At the end of the third year it is decided to tear down the building. It costs $200.00 to tear it down, and the estimated value of the scrap which can be used in the construction of the new building is $800.00. Unusable scrap is sold for $300.00.

INSTRUCTIONS: 1. Make the journal entries to record the foregoing.

2. Explain how the results of the operation of the building will be shown on the Statement of Profit and Loss.

CHAPTER LXX

SYSTEM BUILDING

Need for Proper Systems

The student has learned in previous chapters that a very considerable part of the information needed in business management is obtained from the accounting records. It should be apparent, therefore, that each business needs an accounting system which will provide it accurate and comprehensive information. The accounting needs of companies are so different that it is usually necessary to design an accounting system to meet the requirements of each. It is true that the principles of accounting we have been studying are applicable to each case, but modifications have to be made with reference to the number of accounts, the form of the records of original entry, and the procedure to be followed.

Despite these variations, the procedure for designing and installing a system is quite similar in each case. It is the purpose of this chapter to discuss this procedure and to explain the important factors to be considered in system building.

Requirements for a Satisfactory System

In designing a system, the accountant should keep in mind the following requirements of a satisfactory accounting system:

(1) It should provide the information needed by the executives in handling their management problems.

(2) The information should be available as quickly as possible after the completion of the operations with which it deals.

(3) The system should be constructed as simply as possible and so it can operated at a minimum of cost.

(4) It should provide the necessary safeguards for the company's investments in its various assets.

(5) It should be in accord with correct accounting principles.

(6) It should not only meet the present needs of the company but also be capable of expansion to meet the future needs of the company if it increases its volume of operations.

These requirements seem obvious, but they are so frequently disregarded in the installation of a system that it is thought worth while to discuss each briefly.

Since the primary purpose of accounting is to provide information for the use of the management, it should be self-evident that the needs of the executives of a business should be carefully studied before an attempt is made to install a system for the business. This necessitates that careful attention be given to the kind of problems each executive has to handle and the information he needs in their solution. It is then possible to ascertain if this information can be obtained profitably from accounting records and, if so, to design the records so they will provide it in the most useful form.

In financial institutions, particularly banks, it is found that a statement of the condition of the bank is available on the night of closing or on the following day. This is the ideal situation, but it can not prevail in companies of a different type. The length of the period between the closing date and the date when the information is available to the management varies greatly. In the case of a small trading company, the lapse of time is generally only a few days. As companies become larger and their business becomes perhaps worldwide, the period of closing is gradually extended. For example, if a company whose general office and general records are kept in the United States, operates a selling branch in Australia, it is impossible to prepare a consolidated report of financial condition or of profit and loss as soon as would be the case if there were no Australian branch. Many companies realizing this difficulty instruct their branches located in foreign countries to cable their important figures to the general office in the United States at the earliest possible moment and thereby save the time of mail transportation.

Many companies being unable to prepare a daily financial statement, prepare one monthly, still others quarterly, and some only annually. Within the last few years, the New York Stock Exchange has been attempting to force all companies whose securities are listed upon the exchange to furnish quarterly statements of income to the exchange, to the company stockholders, and to the public. It seems logical that if the officials of the New York Stock Exchange consider it necessary to the various interests of a company to have quarterly statements of income, it is still more necessary for the management of the enterprise to have them.

Most systems have been evolved, that is, they have been started in a small way at the beginning of the company and have been gradually changed as necessity demanded additional infor-

mation or as the particular enterprise expanded into new fields. In this evolution a comprehensive revision of the system is frequently not made and the system becomes cumbersome and often inefficient. The result is that information is often accumulated in an unscientific manner and at a cost which is out of proportion to the value of the data accumulated. It is of great importance that a system be simply constructed and efficiently operated, and it is desirable that from time to time as the business changes or expands, a review of the system methods of an enterprise be made by one qualified to pass upon their efficiency.

All companies use cash in their operations. Many companies own large amounts of securities. Others may also own fixed assets, receivables and other items. It is unfortunately true that for some years, the percentage of fraud and theft within companies by employees has been materially increasing. A correct system of accounts may apply methods of internal check which will greatly or entirely alleviate this problem. The most general method of the application of internal check is in the construction of accounting records and the details of their operation in such manner as to make two or more individuals jointly responsible for their operation. This necessitates in the case of fraud, a collusion between employees which on the face of it is dangerous to each employee for fear of being reported. There is a decided tendency among people not to allow others to know of their misdeeds. Furthermore, if these misdeeds are being performed, it is essential to the protection of the innocent individual that he report such actions in order that he, himself, may not receive the blame.

It is self-evident that all accounting records should be maintained in harmony with correct principles of accounting and the accountant must have these principles constantly in mind in designing a system.

In the construction of a system it is quite essential that the accountant give consideration to the future as well as the present needs of the company. It is difficult and costly to install a new system and discard an old one. At least a considerable part of this difficulty can be forestalled if the original system is designed with future needs in mind. For example, in preparing a classification of accounts, a more comprehensive classification than is needed at present can be prepared. Only the accounts now needed will be used and additional accounts in the classification will be used as needed. Finally the whole classification can be employed without any great difficulty. On the other hand, if only the original needs of the company were considered when the classification was prepared, future needs would have required the designing of an entire new classification.

Information Necessary in the Building of Systems

Before starting to build a system, the systematizer must have information of various kinds. He must constantly bear in mind first of all the definite demands for the system as stated by the management as well as any definite limitations placed on him by the management. He must, at all times, be in agreement with the management as to the system or must be able to change his ideas or theirs.

The systematizer must have a detailed knowledge of the character of the business and a familiarity with its operations. For example, he must know whether or not the company does a cash or credit business or both. This is necessary to determine what additional data may be required if the credit function is performed. He must visualize the possible future development of the business and what demands might be made of the system upon its future development. He must understand the plan of organization of the company. For example, is the business departmentalized in its organization and is a system desirable, therefore, which shows departmental results? Again, is the sales territory divided into districts and under the supervision of district sales managers or is it controlled by one general office sales organization? If the former, are the sales results desired by territories? Are profits by territories wanted? If the latter, is information wanted by the general office management upon the efficiency of the individual salesmen, or upon the volume of sales by commodities and the margins of profit or loss on them?

The systematizer must acquaint himself with the personnel of the company. It is useless to attempt to give duties in the operation of a system to an individual who is incapable of their performance. If such individuals are found to be employed in the accounting department of a company, it may be necessary either to change the system to conform to the ability of the individuals, or to consult with the management on the advisability of the transfer of these employees to other parts of the business and the substitution of more competent persons for the operating of the accounts.

The general policies of the company are a legitimate subject of investigation in the formulation of a system. For example, some companies will make sales on established prices and will in no case allow a reduction in those prices. In other cases, goods will be sold at market values. The first case arises generally in the products of companies nationally known, who advertise extensively in national publications. These companies may have created demand for their products which does not necessitate a decrease in price to meet competition. If concessions are given, information may be desired in connection with the amounts

thereof or the commodities on which they are made, or both. A similar situation would arise in the case of the giving of cash discounts.

The systematizer must thoroughly acquaint himself with the details of the old system. If the company has previously been operating an accounting system, it would be foolhardy to throw out the old system entirely, as parts of it can usually be used in the new one or at least adapted to meet the needs of the new system. This is true for two reasons. If the usable parts of an old system are thrown out, it increases the cost of installation, whereas it should always be the aim of the systematizer to install a new system or revise the old at the lowest possible cost, giving the greatest service to the company. Secondly, the greater the amount of revision of an old system, the greater will be the temporary disruption in the smooth operation of the accounting work. If some employees can be allowed to continue operating their part of the accounting system in the old manner, it decreases the disruption which frequently follows for a short time the installation of a new system.

To summarize, the systematizer should have information on all the various operations of the business. Although there must always be a practical limitation on the amount of information he can take the time to secure, the more information he has the more rapidly and intelligently he can proceed.

Building a System

When sufficient data regarding the various activities of the company have been obtained, the work of building a system may start. A general procedure for building a system may be outlined as follows:

(1) Analyze and classify the activities to be recorded and ascertain the volume of transactions resulting from each group. For example, ascertain the volume of sales transactions, purchase transactions, etc.

(2) Prepare a card of accounts for Balance Sheet and income and expense items.

(3) Outline the records to be used.

(4) Design the forms to be used.

(5) Write the specifications or instructions for the operation of the system.

Most businesses have the customary divisions of activities, such as sales, purchasing, manufacturing, and financing. All of these may not exist in any specific enterprise, but most of them

will be present in each case. The division of the company's activities into its functional groups is quite necessary. The determination of the volume of transactions within each division is of the utmost importance in the planning of the records. If the volume of transactions is great, different types of records will be used than if a smaller volume of transactions occur. The division of work between individuals can be outlined through this planning.

The systematizer is then ready to make up his first part of the system proper. He will list each account for the Balance Sheet and the Profit and Loss Statement or the accounts underlying these statements which he considers necessary to give the proper information to the management. In the case of factory accounts, he may set up individual accounts for steam, electricity, indirect labor, direct labor, taxes, or others, or in the Balance Sheet he may include in separate accounts cash on hand, accounts receivable due from customers, accounts receivable due from employees or whatever classifications fit the business. It is often the practice in setting up a chart of accounts to number each account. This has an advantage in that it eventually becomes prevalent for the employees to speak of the accounts by number; and furthermore the charges to the accounts may be inserted in the books of original entry by number with greater ease and speed. If a system of numbering of accounts is adopted, care should be taken to reserve sufficient numbers for accounts which will be needed as the operations of the business increase in value.

Many of the forms required for an accounting system can be purchased from stationers at a much lower cost than they can be printed. Most of the forms carried by stationers are stock forms which can be purchased in small quantities from time to time without the necessity of immediate purchase of a large supply. All the suitable forms which can be purchased in this way should be used. This reduces the cost of operating the system and also reduces the installation cost, since it requires much time to design forms and supervise their printing. Those forms which can not be purchased in stock sizes and rulings, must be blocked out by the systematizer, given to the printer, and carefully supervised until completed.

When the accounts have been charted and the underlying records made, instructions should be written showing in detail how the system is to be operated. Each account included in the chart of accounts should be described, telling what items should be charged to it, what items should be credited to it, and what disposition of the account is to be made. These instructions will be useful to employees when they are in doubt as to the correct procedure and will also be very useful to new employees.

Installation of a System

A new system should be installed whenever possible as of the beginning of a new accounting period. For example, if a company makes its annual closing of accounts on December 31, it is advisable to start the operation of the system as of January 1. The reason for this is that if the new system were started sometime during the fiscal year, the classification of accounts, particularly of expenses and income, would probably not be the same for one part of the year as for the other part and the comparison between the operations of the two periods would be of less value to the management. It is even advisable in some cases to reclassify the accounts of the company for a previous year or years in order to obtain a comparison of the previous years with the current year operated under the new system.

If the installation is expected to be a long and tedious one, it may be necessary that it be done gradually. In such cases, the installation may start prior to the end of the fiscal year. If such a method is adopted, the part of the installation made during the old year should be that which interferes with the old classification to the smallest degree. The installation if gradual should be made only as fast as the office employees are able to learn and perform their new duties. Otherwise, the system will break down before it has had a chance to operate.

After the installation is complete, it is advisable that the systematizer spend time in supervision of its operation until it is known that it will work smoothly without his aid. More time should be spent immediately after its installation than later, and gradually it should be turned over to the company for its operation without any direction.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Discuss briefly the requirements of a satisfactory accounting system.

— 2 —

You are asked by the manager of the C. B. Lyons Company, an old established mercantile concern, to investigate its accounting system and recommend such changes as you think would improve it. What information would you need to do this intelligently?

— 3 —

The James Wholesale Grocery Company, which is in process of organization, employs you to install an accounting system. Outline the procedure you would follow.

— 4 —

In what respect do the two cases described in Questions 2 and 3 differ? Explain the effect of this difference on the procedure you would follow in each case.

— 5 —

The bookkeeper of the Mays Company makes all charges to customers' accounts, receives remittances on account, records these in customers' accounts, and deposits the cash received in the bank. Under ordinary conditions, would you consider this procedure satisfactory? Why?

— 6 —

The employees of A. B. Jones, retail grocer, consist of two sales clerks and a delivery truck driver. He owns his store building, the equipment in it, and a light truck. He does most of his buying in person or by telephone, and sells for cash only.

The White Grocery Stores, Inc., maintains ten branch stores in the same town. Purchases are made in large quantities, stored in a warehouse, and redistributed to the branches. Sales are made for cash only. The general office is located in an office building, separate from the stores. The office force consists of five major executives, seven subordinate executives, and thirty stenographers and clerical workers.

Compare the need for information such as that provided by the accounting records in these two businesses. What effect would this have on the accounting systems used by the two businesses?

— 7 —

The Progress Laundry Co., a small concern recently established, is operated by two partners, one of whom keeps the accounting records as a part of his duties. You are asked by this partner to prepare instructions for the use of a loose-leaf cash journal which he has purchased. On investigation, you find that he has purchased a large quantity of these cash journal sheets, which contain the following columnar headings:

Cash Dr. and Cr.; Date, Name, Check No.; General Dr. and Cr.; Accounts Receivable Dr. and Cr.; Accounts Payable Dr. and Cr.; Dry Wash Sales Cr. (pounds and amount), Wet Wash Sales Cr. (pounds and amount), Thrifty Wash Sales Cr. (pounds and amount); Soap and Chemicals Purchases Dr.; Salaries Dr.; Selling Expenses Dr.; Delivery Expenses Dr.; General Expenses Dr.

What instructions would you give the partner in charge of the accounting records for the use of this record?

— 8 —

R. M. Gray, accountant, is called upon by the president of the Grant Iron Castings Company to make a study of the accounting system in use and revise it to meet the needs of a rapidly growing business. Among other things, Mr. Gray advises the purchase of bookkeeping machines and the employment of additional clerical help in the bookkeeping department. The head bookkeeper, who has been in the employ of the company for many years, raises many objections to the changes suggested by Mr. Gray. The president also is reluctant to make some of the changes because of the additional expense involved. What should Mr. Gray do in this case?

— 9 —

R. E. Brown, an accountant, is employed by the Jenson Milling Co. to revise its accounting system. Mr Brown has had considerable experience in installing systems, but not in this particular line of business. Under these conditions, do you think he should undertake the job? Why?

— 10 —

Walter Long operates a grocery store in a community of 4,000 population. He buys and sells both for cash and on account. He owns the store and delivery equipment, but rents the storeroom and garage. His employees consist of a clerk and a truck driver, who works in the store in his spare time.

Describe briefly the accounting system you would recommend for Mr. Long's use.

LABORATORY MATERIAL

Exercise No. 256

The Porter Pen Company, manufacturers of a newly patented design of fountain pen, with its main office and factory in Rochester, has concentrated its initial sales efforts on the states of New York, Pennsylvania, and Ohio. During the first year, much local advertising was done; subsequently, each of the three states was assigned to a salesman. The advertising was extended into other states to introduce the company's product to the trade before sending additional salesmen into new territory.

Orders received by salesmen are forwarded to the Rochester office, passed on for credit by the credit manager, billed in quadruplicate, and shipped from the factory by express, parcel post, or steamer. Sales to local merchants are delivered by local express or messenger.

Salesmen are paid a monthly salary of $150.00 and 10% commission on sales. The selling price of the two styles of pen manufactured, each in two sizes, is fixed by the main office.

The Rochester organization consists of the following:

(1) E. B. Porter, President and General Manager.
In charge of purchasing and production, as well as general supervision of the business.

(2) Chas. Dawson, Treasurer.
In charge of credit and collections, billing, and supervision of financial policies.

(3) J. H. Skillman, Secretary.
Office manager, in charge of general correspondence and files.

(4) John Sherwin, Sales Manager.
Supervises salesmen and advertising.

(5) G. M. Mackay, Superintendent.
Supervises factory and shipping department.

(6) Twelve stenographers and clerical assistants in the office; forty foremen and workers in the factory; four shipping and stock clerks.

The main office and factory are located in the same building, which is leased for a period of ten years, the lease being payable in monthly instalments.

INSTRUCTIONS: 1. Show, in the form of a graph, the organization of the Porter Pen Company.

2. Make up a chart of accounts to be maintained on the general ledger.

3. Design the books of account, showing the headings of the columns.

4. Draw up, in skeleton form, the Balance Sheet and Statement of Profit and Loss.

5. Write a brief set of instructions for the use of the employees who will operate the system.

CHAPTER LXXI

NON-PROFIT ORGANIZATIONS

Types of Non-profit Organizations

In addition to the typical form of business unit operating for the purpose of making a profit, there are some institutions of a social, educational, philanthropic or semi-business nature which are operated for the benefit of: (a) the members of the organization, (b) the community in general, or (c) as an aid to business concerns which operate for profit. These organizations are usually managed by a secretary or general manager who takes his orders from the members of the organization.

In the great majority of cases, these associations are not incorporated. In a few, however, a charter is issued authorizing the organization to do business as a non-profit corporation. Such an organization may issue a certificate to the individuals or firms who are members. No dividends, however, are payable upon this stock and it becomes then merely an evidence of membership giving a proportionate right to the holders thereof in the assets at liquidation, if liquidation occurs.

The three principal kinds of non-profit organizations are:

(1) Trade associations
(2) Clubs
(3) Educational or other philanthropic institutions

Trade Associations

In most lines of industry there is a trade association the members of which are composed of the companies or firms doing business within that particular industry. For example, the United States Face Brick Association is the trade association for companies manufacturing brick of this type, and the American Bar Association is the professional organization for practicing attorneys. These or similar associations act in an advisory capacity to their members and often accumulate information which may be of value to the members within the industry. Their income is received generally from dues paid by each member or from donations given by the firms within the industry. Sometimes these dues or donations are of uniform amount for each

member firm, and sometimes they are based upon the volume of products or sales of the various firms. For example, the income received by the United States Automobile Chamber of Commerce, the trade association for the automobile manufacturers of the United States, is based upon the value of cars or trucks sold by each corporation.

Usually the accounts of these associations are kept primarily on a cash receipts and disbursements basis, although some accruals may be made. For example, accounts receivable may be set up and the income account with Dues credited for the amounts due from members. The reports of these associations show the cash received classified by source and of cash disbursed classified by purpose for which spent. In cases where an association carries on several classes of work or where it has several departments, the disbursements will be classified in some degree of detail under each type of departmental operations.

Clubs

Within the last few years, there has been a very marked increase in the number of clubs in the United States. This is particularly true in the case of golf clubs and athletic clubs located in the principal cities of the country. These clubs generally have no capital stock outstanding but in lieu thereof membership certificates are issued. These certificates often carry with them a proportionate interest in the fixed properties of the club. For example, if a golf club has 200 members, each membership carries with it 1/200 interest in the property of the club.

The assets of clubs are in general much like those of an organization organized for profit. They will often have fixed assets, deferred charges, inventories, accounts receivable, and cash. The inventories will be composed of linen, tableware, food supplies, etc., and the accounts receivable will be composed primarily of amounts due from members either for dues or in payment of club services rendered. The income of these clubs is almost always in the form of dues and is based on estimates of yearly costs of operation. The dues are payable either annually, semi-annually or quarterly. If they are payable annually, for example, that portion of the dues applicable to the period of operation subsequent to the closing date are generally set up as deferred credits, under the title of "Dues Unearned".

In some cases the major operations of a club are confined to a relatively short period of time during which the majority of the expenses of the club will be incurred. In such cases, if the annual closing date of the club occurs sometime prior to the date for which the annual dues are paid, the dues may be taken into income but a reserve set up which makes provision for the estimated

expenses to be incurred by the club to the close of the year for which the dues are paid. Such a case often occurs in social clubs in suburban communities. The active social season, for example, will close perhaps at the end of February, but the dues will be paid for the year ending May 31.

Illustration No. 183 shows the Statement of Profit and Loss of the Taylor Society, a national organization of business men.

THE TAYLOR SOCIETY, INC.

STATEMENT OF PROFIT AND LOSS

FISCAL YEAR ENDED OCTOBER 31, 1926

INCOME				
Initiation fees	616	88		
Dues	13,600	44		
Bulletin	3,320	27		
Special contribution	315			
Other	280	37		
Total before adjustment			18,132	96
Less deductions and allowances			3,008	10
Gross income			15,124	86
EXPENSES				
Salaries	14,896	52		
Bulletin	2,544	44		
Rent	1,452			
Office Expense	1,111	82		
Meetings	1,317	52		
Membership promotion	503	41		
Other	220	53		
Total expenses			22,046	24
Net loss before deducting interest, etc.			6,921	38
LESS				
Interest	2,292	76		
Incorporation expense	515	88		
Bad debts	635	81		
Depreciation of equipment	129	40		
Total			3,573	85
TOTAL LOSS FOR THE YEAR			10,495	23

Illustration No. 183, Statement of Profit and Loss of an Association

Illustration No. 184, which shows a Balance Sheet of the Union League Club of Chicago, is indicative of the form of Balance Sheet used by such organizations.

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STATEMENT OF PROFIT AND LOSS

FISCAL YEAR ENDED OCTOBER 31, 1926

INCOME		
Initiation fees	616 88	
Dues	13,600 44	
Bulletin	3,320 27	
Special contribution	315	
Other	280 37	
Total before adjustment		18,132 96
Less deductions and allowances		3,008 10
Gross income		15,124 86
EXPENSES		
Salaries	14,896 52	
Bulletin	2,544 44	
Rent	1,452	
Office Expense	1,111 82	
Meetings	1,317 52	
Membership promotion	503 41	
Other	220 53	
Total expenses		22,046 24
Net loss before deducting interest, etc.		6,921 38
LESS		
Interest	2,292 76	
Incorporation expense	515 88	
Bad debts	635 81	
Depreciation of equipment	129 40	
Total		3,573 85
TOTAL LOSS FOR THE YEAR		10,495 23

Illustration No. 183, Statement of Profit and Loss of an Association

Illustration No. 184, which shows a Balance Sheet of the Union League Club of Chicago, is indicative of the form of Balance Sheet used by such organizations.

UNION LEAGUE CLUB OF CHICAGO

Comparative Balance Sheets as at Feb. 28, 1927, and Feb. 28, 1926

ASSETS

	1927		1926		Increase *Decrease*	
CURRENT ASSETS:						
Cash	9,885	06	17,925	84	*8,040*	*78*
Demand loan (secured by collateral)	106,000		....	..	106,000	
Accounts receivable	95,433	08	46,451	43	48,981	65
Inventories—materials and supplies	23,011	76	15,498	74	7,513	02
	234,329	90	79,876	01	154,453	89
GENERAL MORTGAGE FUND:						
Cash	441	31	2,649	77	*2,208*	*46*
Demand loan (secured by collateral)	6,000		50,000		*44,000*	
Due from members for general mortgage bonds subscribed	575		104,920	05	*104,345*	*05*
	7,016	31	157,569	82	*150,553*	*51*
CAPITAL FUND:						
Cash	511	09	41,510	68	*40,999*	*59*
Sinking fund cash	68	50	68	50	....	..
Demand loan (secured by collateral)	38,000		100,000		*62,000*	
Investment in general mortgage 6% Sinking Fund Gold Bonds, at cost	238,775	38	....	..	238,775	38
	277,354	97	141,579	18	135,775	79
FIXED ASSETS:						
Land	1,202,377	17	1,202,377	17	....	..
Building	3,466,724	20	2,674,313	20	792,411	
Machinery and equipment	165,171	82	57,378	79	107,793	03
Furniture and fixtures 270,669.86 Less reserve for depreciation 20,300.24	250,369	62	107,855	98	142,513	64
Decorating and painting	55,120	39	....	..	55,120	39
Art works	106,611	50	106,611	50	....	..
Library	11,176	37	11,176	37	....	..
China, glassware and silver	48,900	44	....	..	48,900	44
Linen	26,338	70	....	..	26,338	70
	5,332,790	21	4,159,713	01	1,173,077	20
DEFERRED CHARGES:						
China, glassware, silver, linen, etc.	29,866	27	24,810	32	5,055	95
Prepaid insurance	12,629	96	974	40	11,655	56
	42,496	23	25,784	72	16,711	51
	5,893,987	62	4,564,522	74	1,329,464	88

Illustration No. 184, Balance Sheet of a Club

UNION LEAGUE CLUB OF CHICAGO

Comparative Balance Sheets as at Feb. 28, 1927, and Feb. 28, 1926

LIABILITIES

	1927		1926		Increase *Decrease*	
CURRENT LIABILITIES:						
Accounts payable..................	54,724	19	16,273	10	38,451	09
Accrued payroll..................	22,117	75	9,445	15	12,672	60
S. Water St. improvement assessment..........................	1,207	76	1,772	76	*565*	
Tax on dues and admission fees...	8,622	94	5,553	02	3,069	92
Accrued interest..................	51,404	75	31,669	25	19,735	50
Accrued taxes....................	94,804	64	35,792	93	59,011	71
	232,882	03	100,506	21	132,375	82
SUNDRY FUNDS:						
Foundation for Boys' Club (members' subscription)...............	7,094	64	6,474	90	619	74
Public Affairs Committee	2,402	48	4,235	25	*1,832*	*77*
Entertainment Committee.........	1,141	90	....	..	1,141	90
Miscellaneous....................	11,128	53	12,494	11	*1,365*	*58*
	21,767	55	23,204	26	*1,436*	*71*
BONDS AND MORTGAGES:						
First Mortgage, 5½%.............	2,500,000		2,500,000		....	..
Less Amount due from Northwestern Mutual Life Insurance Co....	25,000		1,325,000		*1,300,000*	
	2,475,000		1,175,000		1,300,000	
General Mortgage, 6% Sinking Fund Gold Bonds—						
Authorized..................	2,000,000		2,000,000		....	..
Less Retired by Sinking Fund	41,000		20,750		20,250	
	1,959,000		1,979,250		*20,250*	
	4,434,000		3,154,250		1,279,750	
DEFERRED CREDITS:						
Regular dues unearned............	32,489	90	24,626	43	7,863	47
Full paid dues—unearned..........	9,890	56	11,882	56	*1,992*	
Athletic membership dues—unearned......................	14,500		2,983	33	11,516	67
Lockers—unearned................	1,681		....	..	1,681	
	58,561	46	39,492	32	19,069	14
SURPLUS:						
General fund.....................	869,421	61	1,105,490	77	*236,069*	*16*
Capital fund.....................	277,354	97	141,579	18	135,775	79
	1,146,776	58	1,247,069	95	*100,293*	*37*
	5,893,987	62	4,564,522	74	1,329,464	88

Illustration No. 184, Balance Sheet of a Club

Educational and Other Philanthropic Institutions

The most important group of non-profit organizations, and certainly the group which from the standpoint of accounting varies to the greatest extent from the accounts of profit organizations, is that of educational and other philanthropic institutions. The services which these institutions perform are semi-public. In fact, in many cases similar services are rendered by governmental bodies. For example, in one city the hospitals may be operated by the municipality. Again, practically every state within the United States operates its own state university. Private institutions have been organized in many cases, however, which perform functions similar to those performed by governmental institutions.

Whether these institutions are operated by governmental units or private individuals, the accounting methods used by them are very similar. When these institutions are operated by the government, appropriations are made from governmental funds for at least part of their support. If they are privately operated, it is usually necessary to secure at least part of the funds for their operation from sources other than those who make use of the service, in order to render the service at a price which is within the means of the general public to pay.

Operating Receipts

The income of these institutions may be classified as follows:

(1) Receipts from individuals for services.

(2) Donations to meet expenses.
  (a) By governmental appropriation.
  (b) By private individuals.

(3) Income from securities or endowments.

That portion of the income which is to be received from governmental appropriations may be credited to income on an accrual basis. If payments are received under these appropriations in advance of the period to which they are applicable, the appropriate amounts should be shown as deferred income. There is not the same danger in the accrual of income expected to be received from governmental bodies as in the case of receipts from other sources because it is generally considered that the credit of governmental bodies is of a higher order.

Where donations are received from others, it is generally prevalent to take these items up into income as received. In some cases, donations are made for a specific purpose. For example, an individual may donate a sum of money to a university

to meet the expenses of a particular department or to be used to pay scholarships to worthy students. Under these circumstances, the amounts received must be credited to the proper income account according to the intent of the donor as shown in the resolution of acceptance of the gift passed by the Board of Trustees.

Income from Endowments

The most important factor in the accounting for institutions is in the handling of endowments and the income received from them. In the majority of cases, investments in the form of securities or sometimes in the form of cash, which are converted into interest-bearing securities by the institution, may, according to the intent of the donor, be used only in a specially designated manner, and if the income from these securities is not used in such manner, the officials of the institution may be liable to legal action. In order to protect themselves, they must be certain that the income so derived makes its way to the proper income account against which only proper charges may be made.

When income is received from these investments either in the form of interest or dividends, cash is charged and the proper income account credited, for example, the income account "John Doe Scholarship Fund". The total of all receipts of such nature will give the total income from investments.

Operating Expense Accounts

The operating expenses of the institution are or should be recorded in classified accounts which fit its particular needs. For example, in the case of a school, there will be expense accounts classified to show the cost of operating the various departments, such as the School of Arts, Literature and Science, the School of Law, and the School of Medicine. Other main classifications will include expenses for the operation and maintenance of the campus and buildings, and office expenses. Underlying these main divisions, there may be numerous operating accounts composed of salaries for teachers in each department, general expenses of each department, etc. It may be necessary to keep accounts in some cases which will classify the expenses according to the income. For example, an account might be kept under the heading of "Payments on John Doe Scholarships" which would show the disbursements of the income received from such use.

The detailed operating accounts of institutions of this character are generally quite numerous. As a result, it is usually desirable to keep the income and operating accounts in an operating ledger subsidiary to the general ledger.

Accounting for Endowments

The accounts of institutions must not only provide means for the proper classification of the income and expense, but they must also provide means of verifying the expenditures made out of gifts received as capital. The great majority of gifts are made with a restriction that they are to be invested and that only the income may be used in meeting the operating expenses. There may also be other restrictions which must be carried out.

When an individual offers to make a donation to an institution, the donation is either accepted by the Board of Trustees according to the offer or, if it is believed that the donation if accepted with these restrictions is not in accordance with the policy of the organization, a counter offer is made to the donor. If an agreement is finally reached between the institution and a prospective donor, a resolution is passed by the Board of Trustees accepting the donation according to the terms agreed upon. These terms must then be very carefully followed out.

The method of accounting for donations or endowments depends upon whether or not there are many of such endowments. If there are only a few, all of these accounts may be kept in the general ledger. If there are many, a subsidiary ledger may be set up. When gifts in the form of securities or cash come into the possession of the institution, a journal entry is made, for example, as follows:

	Cash Uninvested	....	
	Second Liberty Loan Bonds (John Doe Scholarship Fund)............	....	
	John Doe Scholarship Fund		....

Upon the subsequent investment of the cash, an entry will be made charging the securities account, for example, American Telephone & Telegraph Company Bonds (John Doe Scholarship Fund), and crediting Cash.

The credit to the fund account as shown in the above journal entry is a method of stating their accountability according to the trust. It represents in effect a restricted surplus account subject to the conditions of the donor. These fund accounts may be numerous. They must not be confused with fund accounts which are shown on the asset side of many Balance Sheets and which in the latter case represent amounts set aside for the payment of indebtedness. The term *fund*, as used in the Balance Sheet of institutions, has a particular meaning and has no relation to the asset type of fund.

TABLE I

Balance Sheet, June 30, 1926

Dr.						
Endowment Assets						
Investments of endowment funds (Schedule I)			35,219,609	77		
Cash awaiting investment (Schedule VII			83,957	66		
					35,303,567	43
Plant Assets						
Buildings (Schedule II)	11,232,815	40				
Grounds (Schedule III)	5,091,618	29				
Books, equipment, and furniture (Schedule IV)	2,476,649	77				
			18,801,083	46		
Investments of building funds (Schedule I)			5,011,376	34		
Cash on hand (Schedule VII)			587,412			
					24,399,871	80
Current Assets						
Investments (Schedule I):						
Funds for designated purposes (Schedule X)	1,338,219	96				
Funds held temporarily (Schedule XI)	497,121	50				
Other general funds	381,267	19				
			2,216,608	65		
Materials and supplies (Schedule V)			55,336	25		
Receivables (Schedule VI)			261,216	95		
University Press			296,711	80		
Cash on hand (Schedule VII)			769,346	58		
					3,599,220	23
					63,302,659	46
Cr.						
Endowment Funds						
(Schedule VIII)					35,303,567	43
Plant Funds						
Capital (Schedule XII)			14,859,759	54		
Building and equipment funds (Schedule IX)			9,540,112	26		
					24,399,871	80
Current Funds						
Working capital (Schedule XII)			181,514	10		
Funds for designated purposes (Schedule X)			1,659,731	44		
Funds held temporarily (Schedule XI)			652,117	55		
Income credits (Schedule XIII)			292,207	43		
Reserves (Schedule XIV)			625,530	30		
Current liabilities (Schedule XV)			188,119	41		
					3,599,220	23
					63,302,659	46

Illustration No. 185, Balance Sheet of a University

Similar to the manner of segregating the accountabilities through funds, the assets representing these funds should be earmarked. Separate asset accounts need not be kept, however, for each kind of asset, but each investment other than the uninvested cash should show to what fund it belongs, as is illustrated

by placing brackets around the description of the fund to which the securities belong in the journal entry on page 1096. In many instances an institution will hold the same kind of an investment in two funds. For example, it may hold $5,000.00 par value of Second Liberty Loan Bonds in the "John Doe Scholarship Fund" and it may hold Second Liberty Loan Bonds in the "William Smith Memorial Library Fund". It may not be necessary to carry separate accounts in this case for these Liberty bonds, but a memorandum should be made on the ledger account show-

TABLE VI

UNIVERSITY BUDGET INCOME — COMPARATIVE ANALYSIS

	1924–25			1925–26		
	Amount		Percentage	Amount		Percentage
I. Student Fees—Intra-mural						
A. Tuition—For University Instruction given on the Quadrangles						
1. Arts, Literature, and Science						
(a) Graduate	225,288	35	6.09	265,853	50	6.70
(b) College	556,654	99	15.05	581,762	67	14.72
	781,943	34	21.14	847,616	17	21.42
2. Divinity	31,916		.87	36,072	25	.90
3. Law	78,081	17	2.11	88,567	50	2.29
4. Education	170,749	76	4.61	129,426	15	3.23
5. Commerce and Administration	119,065	57	3.22	116,176	20	3.00
TOTAL UNIVERSITY TUITION FEES	1,181,755	84	31.95	1,217,858	27	30.84
B. Other University student fees	127,544	38	3.44	128,563	61	3.16
TOTAL UNIVERSITY FEES	1,309,300	22	35.39	1,346,421	88	34.00
II. Endowment Income	1,587,108	81	42.93	1,701,939	17	42.98
III. Retiring Allowance Income	71,393	11	1.95	89,332	97	2.31
IV. Other Intra-mural Income						
1. Room Rents and Commons (net)	17,433	10	.47	19,550	36	.49
2. Baptist Theological Union	16,783	55	.45	18,395	65	.46
3. Interest on general account investment and bank balances	84,824	47	2.27	89,520	63	2.20
4. Miscellaneous	64,193	17	1.74	81,399	52	2.08
	183,234	29	4.93	208,866	16	5.23
TOTAL INTRA-MURAL INCOME	3,151,036	54	85.20	3,346,560	18	84.52
V. Income from Other Educational Activities						
1. Home Study	100,524	74	2.72	105,687	40	2.68
2. University College	106,306	50	2.88	108,211	25	2.74
3. Laboratory Schools	269,791	14	7.29	337,045	18	8.49
4. University Extension	11,680		.32	14,269	94	.35
5. University Press	59,198	62	1.59	48,944	57	1.22
	547,501		14.80	614,158	34	15.48
TOTAL	3,698,537	43	100.00	3,960,718	52	100.00

Illustration No. 186, Comparative Income Statement of a University

ing to what funds these securities belong. It is often advisable to carry these securities in detail on working papers scheduled under the funds or classifying them under the funds in the columns at the right.

Examples of the Balance Sheet and the Statement of Income and Expenditures of a university are given in Illustrations Nos. 185, 186 and 187.

TABLE VII

UNIVERSITY BUDGET EXPENDITURES — COMPARATIVE ANALYSIS

	1924–25			1925–26		
	Amount		Per-cent-age	Amount		Per-cent-age
I. Salary Cost of Instruction on the Quadrangles						
1. Arts, Literature, and Science	1,080,031	16	29.26	1,097,582	39	27.62
2. Divinity	47,922	19	1.29	74,111	50	1.95
3. Law	68,237	45	1.84	71,573	53	1.89
4. Education	143,673	75	3.88	130,086	77	3.32
5. Commerce and Administration	103,852	95	2.81	111,359	96	2.78
6. Annuity premiums	12,615	16	.34	17,504	78	.44
	1,456,332	66	39.42	1,502,218	93	38.00
II. Education Expenses Applicable to Intra-mural Student Body						
1. Educational administration	267,009	69	7.21	290,933	88	7.47
2. Laboratory equipment and expense	254,561	14	6.87	278,448	51	7.10
3. Library administration	187,562	72	5.06	204,111	35	5.20
4. Books and binding	60,520	83	1.63	66,405		1.76
5. Physical and social welfare of students	125,002	69	3.37	135,982	59	3.49
6. Fellowships and scholarships	169,332	62	4.57	158,580	38	4.10
7. Tuition remissions	67,959	72	1.83	73,367	92	1.44
	1,131,949	41	30.54	1,207,829	63	30.56
III. Retiring Allowances	58,777	95	1.60	89,332	97	2.42
IV. Business Administration	122,238	43	3.34	159,132	61	3.92
V. Buildings and Grounds	404,709	37	11.00	411,709	14	10.30
TOTAL INTRA-MURAL EXPENDITURES	3,174,007	82	85.90	3,370,223	28	85.20
VI. Expenditures for Other Educational Activities						
A. Extra-mural						
1. Home Study						
(a) Instruction	60,902	52	1.64	63,468	23	1.64
(b) Expense	43,622	22	1.18	52,219	17	1.36
2. University College						
(a) Instruction	76,431	01	2.06	77,046	26	1.95
(b) Expense	29,875	49	.80	31,164	99	.79
3. Institute of Sacred Literature	15,679	57	.42	17,269	94	.43
B. Laboratory Schools						
1. Instruction	157,655	59	4.26	177,155	75	4.57
2. Expense	74,260	45	2.00	113,516	99	2.72
C. Publications						
Journals and book plates	63,498	62	1.74	53,244	57	1.34
	521,925	47	14.10	585,085	90	14.80
TOTALS	3,695,933	29	100.00	3,955,309	18	100.00

Illustration No. 187, Comparative Expenditure Statement of a University

Budgets

Institutions have quite generally adopted an income and expense budget. The reason for this may be said to be because those managing the institution may not be in active charge and desire to put all possible safeguards upon their operation. At the beginning of each year, detailed estimates of income and expenses are prepared which are approved by the Board of Trustees and which then become the authority to the management to operate according to the terms of the budget. In regard to budgets, it is the opinion of the author that many firms operating for profit have something to learn from institutions. A description of budgeting methods is included in Chapter LXXIX.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Jonathan Brand, a philanthropic man of means, wishes to found a social center for newsboys. He secures the assistance of several prominent citizens to act as trustees without pay, and incorporates under the name of "The Brand Social Center for Newsboys". He places with the Central Trust Company $600,000.00 in securities to hold in trust for this institution, the income from the securities to be used in paying operating expenses. State some probable reasons why Mr. Brand did not operate the center as an individual, appointing an agent to take charge for him, instead of incorporating.

— 2 —

The board of trustees of The Brand Social Center for Newsboys passes a formal resolution accepting Mr. Brand's gift. Why is it important that such a resolution be passed?

— 3 —

Why did Mr. Brand place the securities in the keeping of the Central Trust Company instead of turning them over to the institution direct?

— 4 —

A gift of $100,000.00, half in cash and half in securities, is made by an individual to the library fund of an American college, the income from which is to be used in paying operating expenses. (a) How would you record the gift on the books of the institution? (b) When the interest on this gift was received, how would you record the income?

— 5 —

The college mentioned in the preceding question uses $500.00 of the interest received on the securities which are part of its library fund, to purchase new books. Is this purchase authorized? What is the liability of the trustees in this case?

— 6 —

In addition to the income from numerous endowments and gifts, the college mentioned in Questions 4 and 5 receives tuition from students, and, when a deficit occurs, donations from various

individuals to make up the deficiency. What income accounts would you suggest be maintained, so as to classify the income as to source and the purpose for which each is to be used?

— 7 —

The fiscal year of the City Athletic Club runs from October 1 to the following September 30. Semi-annual dues of $60,000.00 are payable at the beginning of each six months' period. (a) At each monthly closing, what amount would you show as income from dues for the month? (b) What disposition would you make of any remainder not shown as income for the month?

— 8 —

At the beginning of operations, the Elks Club purchases china, linen, silverware, glassware, etc. (a) How would you record these purchases? (b) How would you record subsequent purchases of these items? Why?

— 9 —

What expense accounts would you expect to find on the Statement of Income and Expense of a trade association—for example, the National Hardwood Lumber Association, the American Institute of Accountants, the National Association of Credit Men, the Institute of American Meat Packers, the American Management Association, the National Retail Dry Goods Association, the Brotherhood of Railway Clerks, etc.

— 10 —

Would you consider it advisable to have an operating budget of a club to which you belong? Why?

LABORATORY MATERIAL

Exercise No. 257

The following Balance Sheet shows the financial condition of The Martha Gray Home, a residence for business women, as of December 31, 19. . :

THE MARTHA GRAY HOME

BALANCE SHEET, DECEMBER 31, 19. . . .

Assets				*Liabilities and Surplus*		
Cash.		12,987	33	Accounts Payable	15,738	45
Inventories—materials				Accrued Payroll	595	30
and supplies		5,372	45	Accrued Interest on		
Leasehold.		40,000		Notes Payable	525	
Equipment:				7% Collateral Notes,		
Residence. .	$23,195.75			payable in two, three,		
Cafeteria . .	1,875.90			and five years.	15,000	
Gymnasium	2,315.60			Room Rentals Unearned	2,981	
				Cafeteria Coupons Out-		
	27,387.25			standing.	1,309	15
Res. for Dep.	5,362.77	22,024	48			
				Total Liabilities.	36,148	90
China, glass, silver.		3,185				
Linen.		5,279	88			
Prepaid Insurance.		1,385	90			
				Surplus.	54,086	14
Total Assets.		90,235	04	Total Liab. and Surplus.	90,235	04

During the month of January following, $4,959.24 of food supplies and $239.20 of other miscellaneous supplies were purchased on account. The cash receipts and disbursements for this period were as follows:

Receipts:

3,090 $5.00 cafeteria coupon books at $4.50	$13,905.00
Cafeteria cash receipts.	1,159.10
Room rentals.	12,126.00
Use of laundry by guests, 1,613 hours at 10c	161.30

Disbursements:

Creditors on account.	$ 6,159.30
Gas and electricity.	1,293.73
Water.	89.91
Telephone.	285.00
Stationery and printing.	306.10

(Concluded on next page)

Miscellaneous supplies	112.38
Newspapers and periodicals	17.80
China and glass replacements	23.42
Linen replacements	38.65
Upkeep of building and equipment	623.13
Interest on notes payable	525.00
Salaries and wages	7,300.20
Miscellaneous expenses	399.03

January 31, in preparing the monthly statements, the following facts not shown by the ledger need to be considered:

(a) Materials and supplies on hand, $4,771.59

(b) One month's portion of lease expired, $416.67.

(c) One month's depreciation on equipment, at 10% yearly.

(d) Insurance expired, $101.27.

(e) Accrued salaries and wages, $416.73.

(f) Accrued interest on notes payable, $87.50.

(g) Room rentals prepaid by guests, unearned, $2,130.00.

(h) In addition to the cash received by the cafeteria cashier in payment of meals, $12,485.35 in cafeteria coupons were also received in payment of meals served.

(i) Meals are served to employees without charge. Estimated at the average cost, meals furnished employees in January amounted to $744.85.

INSTRUCTIONS: 1. Prepare a Balance Sheet as of January 31, showing the assets and liabilities properly classified.

2. Prepare a Statement of Cash Receipts and Cash Disbursements for the month of January, showing balance January 1, receipts for the month, disbursements for the month, and balance January 31.

3. Taking into consideration the adjustments January 31, prepare a Statement of Profit and Loss for the month of January.

Exercise No. 258

Union College receives the following gifts and endowments during the school year ended June 30, 19..:

Sept. 10. From the Cecil H. Gardner Estate, $10,000.00 in Baltimore & Ohio 4½% bonds, the income from which is to be used for general purposes.

Nov. 27. From Arthur S. Mead's sons, in memory of their father, $10,000.00 in cash, the income from which is to be used in awarding a cash prize to the student who produces a treatise of merit on local labor conditions.

Feb. 13. From John H. Davies, in memory of his son Frederick, land appraised at $95,000.00 and $200,000.00 cash to be used in building a stadium; also $30,000.00 in Baltimore & Ohio $4\frac{1}{2}\%$ bonds, the income from which is to be used in maintenance of the stadium and grounds. The cost of the land appraisement was $500.00, which was paid by the college.

Mar. 9. From Martin Foster, $500.00 in cash, the income from which is to be used to purchase gold medals for award to the four best debaters of each year, one from each class, beginning with the next school year.

June 10. From W. M. Gamble, $3,000.00 in cash, to be invested in securities, the income from which is to be used in assisting a worthy and needy student, preferably from the Junior Class.

INSTRUCTIONS: 1. Prepare, in journal form, entries to place these funds on the books of Union College, and post to the ledger.

Retain the journal entries and ledger for use in the next exercise.

Exercise No. 259

During the same school year, Union College (Exercise No. 258) completed the following additional transactions relating to funds and the income from them

Dec. 10. Invested cash received from Arthur S. Mead's sons Nov. 27 as follows:

6 $1,000.00 Rapid Transit 1st Mort. 7s at 101¾, plus accrued interest from Nov. 10; broker's commission, $9.00; total cost, $6,149.00. This is a temporary investment, the bonds maturing May 10 of the following year.

30 shares of P. & I. common stock at 90 (par $100.00), plus broker's commission, $4.50; total cost, $2,704.50.

Feb. 15. A dividend check for $150.00 was received from P. & I. Co. in payment of annual dividend on common stock, declared January 8.

Mar. 1. Received $900.00 interest on Baltimore & Ohio bonds acquired Sept. 10 and Feb. 13.

9. Paid $5,000.00 for plans for new Frederick Davies Memorial Stadium.

April 12. Awarded contract for stadium to Thayer Construction Co., to be completed September 1, at $190,362.55.

May 10. Sold P. & I. stock in Arthur S. Mead fund, at 89, less broker's commission, $4.50, and transfer tax, 60c; net proceeds, $2,664.90.

12. The six Rapid Transit bonds purchased December 10 matured May 10 and were paid into the First National Bank, together with six months' accrued interest, to the credit of Union College, by Central Trust Company, the paying agents. The First National Bank charged $14.75 collection fees, the net proceeds being $6,194.75.

20. Invested cash in Arthur S. Mead fund in 161 shares of Columbia Gas & Electric stock at 62 (par $100.00); broker's commission, $24.15; total cost, $10,006.15.

28. Advanced Thayer Construction Co. $50,000.00 cash on completion of a specified part of the contract for the new stadium.

June 10. The First National Bank credited the account of Union College with $5.00 quarterly interest on Martin Foster fund, deposited temporarily in a savings account.

15. A check for $150.00 was issued to J. H. Dinsmore, student, to whom the Arthur H. Mead prize was awarded.

16. Invested cash received from W. M. Gamble June 10 in three $1,000.00 American Smelting & Refining Co. 1st Mort. 5s, at 92½, plus accrued interest from April 1; broker's commission, $4.50; total cost, $2,811.17.

21. Paid $1,069.70 taxes on land donated by John H. Davies for stadium.

Sept. 1. Received $900.00 interest on Baltimore & Ohio bonds acquired last Sept. 10 and Feb. 13.

INSTRUCTIONS: 1. Using the same journal and ledger retained in Exercise No. 258, prepare in journal form entries to record these transactions on the books of Union College, and post to the ledger.

2. Show these gifts and endowments, and the income and disposition of income resulting from them, as they would appear on the Balance Sheet and Statement of Receipts and Disbursements of the Union College at the end of the school year June 30.

CHAPTER LXXII

MECHANICAL ACCOUNTING

The Meaning of "Mechanical Accounting"

The term *mechanical accounting* is new in the literature of accounting but well established in business usage. Salesmen of bookkeeping, billing, and calculating machines coined this term and have used it for years to indicate the use of machines for making bookkeeping and statistical records. The word *mechanical* in this term is justified in the sense that some part of the accounting work is done by the aid of machines. In a wider sense, this word is apt, as the purpose in using machines is to supplement human effort by mechanical processes.

Office managers regard the reduction of the separate records of thousands of individual transactions to compact Statements of Profit and Loss, statistical reports and Balance Sheets, as equivalent to a manufacturing process subject to all the general principles followed in large scale production, including subdivision of labor, and the use of mechanical processes of all kinds. The word *accounting* in this term is used in default of any other word which covers the wide range of work so commonly done by adding, billing, posting, calculating, and statistical machines. Moreover, this word can be justified here as referring to a system for making or preparing accounting records. So the term mechanical accounting is used here in the sense of indicating the methods and organization necessary in managing that part of the accounting work which can be done by machines.

Why Machines Are Used

Machines are used in accounting and statistical work because of the increased accuracy, larger output, and uniform legibility in the records produced. An experienced typist can write all day with perfect legibility and uniformity at twice the rate which can be maintained by the most expert penman, even though legibility and uniformity are disregarded by the latter. An office boy can copy, print, and add on an adding machine more rapidly, legibly, and accurately than the most expert accountant can copy the same figures with a pencil. A calculating machine operator can

frequently have the answer to a complicated calculation before a mathematician can finish writing the problem. As most machines used in accounting work are but modified adding, typewriting, or calculating machines, the unvarying mechanical accuracy in computation, greater output, and uniform legibility of written work made possible through the use of these basic machines are realized also in mechanical accounting work.

However, to date, no entirely automatic machines for mechanical accounting work have been invented. For all the machines now in use, operators are required to adjust and set up the mechanism, to select and copy the work, to strike the keys and operating bars, or to insert and remove the record sheets at the proper time. Errors in doing any or all of these acts are possible. Obviously, if the wrong keys are depressed in an adding machine, the total will not be right; if the proper adjustments are not made, no machine will work properly; if the proper paper is not copied correctly, the record will be useless. The devisers of mechanical accounting machines have recognized that these errors will be made, but they have developed safe guards to such an extent that mechanical accounting is practically error-proof. Not that errors are not made, but that an error, when made, is detected so soon that no harm is done. This increased accuracy, especially desirable where large volumes of detailed work must be handled, is the great contribution of machines to modern accounting work.

Errors when using an accounting machine may arise from:

(1) Improper operation or adjustment of the machine, or

(2) Inaccurate copying.

The skill of the operator and the simplicity of the operating process must be relied upon to prevent the mechanical errors. But inaccurate copying must be prevented and detected by some more positive means.

Errors in Mechanical Accounting

Errors in copying figures which are most frequent and troublesome in ordinary accounting work are the most easily detected when machines are used. The frequency of errors in so common a task as copying a column of figures for adding shows the necessity for checking even the simplest of copying work. This checking is best done by having another person compare the new list with the original figures. Such an independent check is always the most reliable, and is used whenever possible. If another clerk is not available, the operator checks his own work, either by direct comparison or by making a second list. In both of these methods there is a strong likelihood that the original error will be repeated, especially where the first error was due to

misreading a number. The important point is to see that a check is always provided upon all work copied, particularly where figures have been copied.

In studying any accounting machine, special attention must be given to the facilities provided for preventing or detecting errors in copying. This is the most vital point in any machine, for unless practically error-proof work is produced, the machine has failed in its most important contribution. The methods used in correcting an error, when made, must be noted also.

What Machines Are Used

The machines most widely used in mechanical accounting practice can be classified under the following heads:

1. Auxiliary machines, such as
   (a) Adding machines;
   (b) Calculating machines.
2. Modified listing-adding machines, such as the
   (a) Burroughs Ledger Posting Machine;
   (b) Dalton Ledger Posting Machine.
3. Modified typewriting machines, such as the
   (a) Elliott-Fisher Bookkeeping Machine;
   (b) Remington Accounting Machine;
   (c) Underwood Bookkeeping Machine.
4. Tabulating machines, such as the
   (a) Hollerith Tabulating Machine;
   (b) Powers Accounting Machine.

The principal machines for mechanical accounting are manufactured by the following companies: Burroughs Adding Machine Co., Detroit, Mich.; Comptometer Co., Chicago, Ill.; Monroe Calculating Machine Co., Orange, N. J.; Moon Hopkins Billing Machine Co., St. Louis, Mo.; Wales Adding Machine Co., Wilkes Barre, Pa.; Elliott-Fisher Billing Machine Co., Harrisburg, Pa.; Addressograph Co., Chicago, Ill.; Remington-Rand, Inc., New York, N. Y.; Underwood Typewriter Co., New York, N. Y.

If the instructor has available any one or all of these machines, it will be well to study each of them in connection with the literature provided by the manufacturer of the machine. If the machines are not available, it will be well to ask the representatives of the various companies to demonstrate the machines, or to write to the above-named concerns for descriptive literature showing the use of their machines and their advantage to the work in the accounting department.

Purposes for Which Machines Are Used

The purposes for which machines are used may be classified as follows:

(1) Adding.
(2) Calculation or Computation.
(3) Preparation of Accounting and Statistical Statements.
(4) Preparation of Accounting Records.
(5) Statistical Analysis.

Adding Machines

Adding machines are the oldest type of machines used in accounting work. They may be used to advantage in any case where it is necessary to obtain frequently the total of a series of numbers. The simple type of adding machine is used only for the purpose of arriving at totals to be entered in records or to check the accuracy of totals shown in the records. The modified adding machines serve other purposes, as explained below.

Calculating and Computing Machines

Most of the so-called *adding* machines are now equipped to perform the other mathematical calculations of subtraction, multiplication, and division. There are other machines which are particularly adapted to perform all kinds of calculations. The Comptometer is probably the best known of these. The purpose of these machines, like the simple type of the adding machines, is either to provide data which serves as a basis of records or to check the accuracy of data recorded in the records.

Preparation of Statements

Machines may be used to prepare various kinds of statements. Probably their most important use in this connection is in the preparation of customers' monthly statements of account, and these will be taken for purposes of illustration. The writing of customers' statements in a large wholesale office is a good example of the advantages resulting from using a machine for this purpose. The accompanying form (Illustration No. 188) shows a statement as written on a bookkeeping machine. The body of this statement contains all the items likely to occur in a statement of this kind. Writing such a statement requires but a simple copying of items from a ledger and computing the balance. The machine is used to print automatically dates, descriptions and amounts, add the amounts exactly as written, and to find the real balance.

STATEMENT

WEINSTOCK-NICHOLS CO.

AUTOMOBILE ACCESSORIES

MAIN OFFICE
538 TO 546 GOLDEN GATE AVENUE
PHONE FRANKLIN 6062

SAN FRANCISCO, Feb. 1, 19

M Renfro Speed-O-Meter Co.
San Francisco, Calif.

All accounts due and payable 10th of the month following purchase.
Return this statement when making remittance.

BAL			
DEC	1	2.35	
JAN	1	45.75	
	3	23.45	
	5	4.34	
	7	50.00	
	9	5.45	
	13	4.00	
	15	50.00	
	17	4.55	
	19	5.06	
	21	3.00	
	25	100.00	
	26	30.00	
	28	.45	
	29	100.00	
	31	3.45	
	30	54.00	
			485.85 S
DIS			
JAN	3	3.00 -	
	6	4.55 -	
	9	5.45 -	
	12	4.00 -	
	15	10.00 -	
		BAL	458.85 *

Illustration No. 188, Statement Prepared on a Bookkeeping Machine

It works more accurately, more quickly, and produces a more legible and uniform product than any clerk.

There is also a by-product to this process which is extremely valuable in itself. The balance of each account as mechanically computed by the machine is used in an audit of the balance of that account as figured in the ledger. This audit is made by having a clerk compare the amounts and balance on the statement with the corresponding items and balance in the ledger. Thus the work

of the ledger clerk in posting, balancing, and writing the statement is checked before the statements are sent to the credit department or the mail-room. Sometimes such a statement balance is used to save the labor of separately computing the ledger balances.

It is well to note that if a bookkeeping machine of the typewriter family had been used for this work, the heading and address also could have been written at the one insertion. In large offices, statements are often headed on an addressograph or by ledger clerks in spare moments during the month.

Preparation of Accounting Records

Machines may be used in various ways in the making of accounting records. Any part of the accounting records may be made by machines, but it is in connection with the construction of the ledger record that they are used most extensively. Wherever numerous accounts are kept to which frequent entries are made, machines may be used to advantage. They are used most frequently in the preparation of (a) the accounts receivable ledger; (b) the balance of stores records. The accounts receivable ledger will be taken as a means of illustrating their use in the preparation of ledger records.

Simple Ledger Posting

A ledger can be posted by a machine as readily as a monthly statement can be written, and with absolute accuracy. The ledger sheets are taken one at a time and the proper debit posting made on each in succession. When all the debits have been posted, the machine accumulator will show an absolutely correct total of the debits exactly as written on the ledger sheets. This total, when compared with the total of debits previously taken from the sales, cash, or general journals, will either agree, thus showing that the amounts were posted accurately, or will differ, thus showing that an error was made. Where posting runs are long, sub-totals are made at certain points when obtaining this predetermined total of items to be posted, and the machine readings at these points are compared. These sub-totals confine the search for errors to small zones and expedite the work of locating the particular error made.

When posting to a sales ledger, merchandise debits, cash credits, merchandise returns, and sundry journal entries are posted in separate runs. The column stops of a posting machine are always arranged to stop the carriage only in the columns actually used when posting that run; thus the arrangement of the column stops and the writing position of the ledger page is different when posting debits from that used when posting credits. This pro-

vides a mechanical check to prevent entering debits as credits. The adding or subtracting action of the accumulators in each column is mechanically controlled at these columns also, so that the items posted are never subtracted when they should be added.

When machines are used, debits and credits are posted at separate runs for three reasons:

(1) To keep totals from each source separate for checking purposes;

(2) To obtain posted totals for making necessary control account entries:

(3) To avoid posting debits in the credits column, or vice versa.

Unit Posting Media

Machine ledger posting requires loose-leaf ledger equipment, having a separate page for each account. The pages in a sales, or customers', ledger naturally are arranged alphabetically or geographically, and to save finding time, should be posted in the same order. But the entries in the bound journals can not conveniently be arranged to correspond with the ledger order, and to post from bound books containing entries not arranged in posting order takes too much time and increases the danger of omitting an item or posting to the wrong account. Loose-leaf posting media are, therefore, used in mechanical accounting. Sales are posted from duplicate invoices, cash credits from individual cash remittance slips, returned sales from credit memoranda, and supplementary entries from journal vouchers. Each of these papers contains the data for but a single entry, and so they are commonly referred to as "unit posting media."

These unit posting media are used to save time for the machine operator in another way. When posting sales, for example, a clerk after finding the total of the duplicate invoices, without checking this total, places each duplicate so as to project as a marker, in front of the customer's account to which it is to be posted in the ledger. When this "stuffing" of the ledger is finished, a predetermined total of the amounts on the invoices is made with sub-totals at places indicated by turning invoices or writing sub-totals on slips. If this total agrees with the previous total, there is little opportunity for error in misplacing, misreading, losing, or overlooking an invoice. However, these two totals, if both are made, must correspond before the ledger is ready for posting. This stuffing operation serves two purposes:

(1) Time is saved for the machine operating clerk, as he does not have to hunt for the ledger sheets to be posted.

(2) Two people have compared the names and addresses on the invoices with the names and addresses on the ledger sheets, to prevent errors in posting to the wrong account.

The clerk who stuffs the ledger can also head any ledger sheets needed for new accounts or second pages.

How Mechanical Posting Saves Time

A study of this explanation of sales ledger posting shows why mechanical posting is more accurate than hand posting. The three common errors in posting have been checked:

(1) The machine total of items posted shows that the correct amounts have been posted.
(2) The machine set-up has prevented any confusion in posting debits or credits as such.
(3) Two clerks have compared each posting medium with each ledger heading to prevent posting to the wrong account.

The increased accuracy thus obtained more than offsets the loss of time involved in using the loose-leaf equipment.

Operations Required in Machine Posting

In machine posting, the following operations in handling the loose-leaf pages must be performed:

(1) The proper page or account must be found;
(2) The page must be removed from the binder, inserted in the machine, and fed to the proper writing point;
(3) The item to be posted must be copied;
(4) The page must be removed from the machine and replaced in the binder. As most postings consist of but a single item to an account at a time, it is obvious that the time consumed in actually copying or posting the item is small when compared with the time used in handling the ledger sheet. Hand posting in a bound book is quicker than machine postings, for there is less time consumed in handling the ledger pages. But the daily mechanical proof of accuracy possible with a machine means time saved at the end of the month, as all errors in posting amounts can be found on the day they are made. There is no necessity for waiting until the monthly Trial Balance to see if any errors have been made and no hunting through a whole month's posting to find those made.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Why must a presentation of mechanical accounting include accounting practices, office management and routine, as well as machine operations?

— 2 —

Define each of the following terms: listing, shifting, predetermined total, posting medium, unit posting media, posting run, binder, heading ledger sheet, pick-up, control account, journal vouchers.

— 3 —

What are the three common errors in posting? How are these errors guarded against when accounting machines are used?

— 4 —

If an operator is required for an accounting machine, how can the machine be a means of saving salaries?

— 5 —

If an extra clerk to run predetermined totals, stuff, and help check is needed for every three operators, how can the machines result in a saving?

— 6 —

Should an extra clerk be used for the auxiliary work? Why not let the operators do this work themselves?

— 7 —

Is a saving in labor cost the only advantage of using an accounting machine?

— 8 —

If all errors are not prevented when using a machine, why use a machine at all?

— 9 —

Must there be a separate ledger sheet for each account opened?

— 10 —

Why should an adding machine list made by one person be checked by another?

— 11 —

Why should all adding machine lists be checked?

— 12 —

Explain what could cause a difference between a predetermined total and the posting total.

— 13 —

Many firms check cash remittances against the ledger balances to check correctness of a remittance, such as mistakes in taking discount, or gross of an invoice. This checking should be done before the posting of these items is done. When and how can this work be best done?

— 14 —

What is done with the duplicate invoices after the posting is completed?

— 15 —

Name the major classes of machines which are used in accounting work.

— 16 —

State the purposes for which machines may be used.

— 17 —

In connection with the preparation of what accounting records are machines used most extensively?

— 18 —

What benefit is derived from the use of unit posting media? Give illustrations.

— 19 —

State the operations which must be performed in posting to ledger records when machines are used.

— 20 —

Since these operations are more than are involved in hand posting, why are machines used?

CHAPTER LXXIII

MECHANICAL ACCOUNTING (Concluded)

Balance Ledger Posting

In many offices the balance of each customer's account is examined so often by the credit department, and others, that to have the balance computed each time a posting is made is considered worth while. Figuring such balances involves only adding and subtracting, so that accounting machines are especially suited to this kind of work. The posting process in this work requires that the new item posted be added to or subtracted from the old balance, according as the item is a debit or credit, and as the old balance is a debit or credit balance.

The accompanying illustration (Illustration No. 189) of a sales ledger page, with extended balance column as posted on a machine, is worth detailed study. On January 1, there was a debit balance of $45.07 shown in the "Balance" column. On January 3, a debit item of $8.92 was to be entered. To do this the machine operator inserted the ledger sheet in the machine and fed it to the correct writing point. Then he copied the old balance shown in the "Balance" column, the machine printing in the "Proof" column the amount set up, and retaining the amount in its accumulator. The ledger sheet was then automatically moved so that the "Debits" column was under the printing mechanism

SHEET NO. 1
RATING Fair — NAME Jos. Howat
TERMS 30 days net — ADDRESS 520 Arch Street
CREDIT LIMIT $100.00

	PROOF	DATE MEMO	DEBITS	✓	DATE MEMO	CREDITS	✓	BALANCE
BROUGHT FORWARD						JAN	1	45.07
	45.07	JAN 3	8.92	✓				53.99*
	53.99	JAN 7	34.01	✓				88.00*
	88.00				JAN 18 CSH	44.17-	✓	43.83*
	43.83				JAN 18 C/M	1.76-	✓	42.07*
	42.07				JAN 21 CSH	42.07-	✓	.00*
		JAN 25	29.80					29.80*
	29.80	JAN 28 J/E	7.55	✓				37.35*
	37.35				JAN 28 RET	37.93-		.58 CB
	.58-	FEB 2	45.10					44.52*
	44.52				FEB 10 CSH	7.55-	✓	36.97*

Illustration No. 189, Sales Ledger Sheet

and the debit item was copied. This was automatically printed and added to the old balance by the machine. The ledger sheet was then automatically moved so the "Balance" column was under the printing mechanism and the new balance written. Writing the new balance left the balance totaling mechanism clear for balancing the next account. After removing this ledger sheet, the operator took the next one to be posted, and so on for that day's run. On January 7, this operation was repeated on this sheet, using the proper amounts when the debit of $34.01 was posted.

On January 18 a cash credit of $44.17 was posted. This time, after the old balance had been picked up and printed in the "Proof" column, the carriage was automatically shifted to the "Credits" column and the amount of the credit copied. This amount was mechanically subtracted from the old balance already in the accumulator and the difference was written as the new balance in the "Balance" column. Later in the day when credit memoranda were posted, another credit entry of $1.76 was posted to this account.

The payment of January 21 balanced the account, the "Balance" column showing no balance. The amount of the return credited on January 28 was larger than the old debit balance, and a credit balance resulted. The credit balance is indicated by the letters "C.B." written immediately after it. On February 2, when a debit of $45.10 was to be posted, the old credit balance was picked up as a subtract quantity and the new balance then represented the difference between the two amounts.

Proving Balance Ledger Posting

A review of the operations performed in posting when extending all balances, shows that two copying operations were necessary:

(1) Copying the old balances from the ledger sheets.

(2) Copying the amounts to be posted.

Proving the accuracy of both of these copying operations is necessary as both amounts affect the new balances as calculated and written. In the preceding chapter it has been explained that the accuracy in copying the amounts posted, can be proved by obtaining a predetermined total of these items from the unit posting media or record of original entry from which they are posted, and comparing this predetermined total with the total shown by the posting machine after the items are entered in it. The same method may be used in proving the accuracy in copying the old balance. A predetermined total is obtained by listing and adding the old balances, as shown by the ledger record, and comparing this predetermined total with the total shown by the

NAME GEO S HOFFMAN CO ACCOUNT NO. 1

ADDRESS 171 BROADWAY NEW YORK CITY LEDGER A TO K

PROVING BALANCE	FOLIO	DATE	ITEMS	DEBITS	CREDITS	OLD BALANCE	BALANCE
		1927 DEC 1	BROUGHT FOR'D				124 50
124 50	2512	2	MDSE	67 40		124 50	191 90**
191 90	2518	7		128 60		191 90	320 50**
320 50	424	14	CASH		124 50	320 50	196 00**
196 00	2532	22	MDSE	14 80		196 00	210 80**

Illustration No. 190, Sales Ledger Sheet

machine after the old balances have been entered in it. This is the method commonly used.

The modified typewriting machines with their multiple accumulators readily total the items posted and the old balances picked up, while the master, or cross-footing, accumulator computes the new balances for each account. Sub-total readings of items posted or old balances picked up can be compared at any time.

Several ingenious methods have been devised to save the labor of totaling the old balances picked up, but none of them are so reliable as the predetermined total method. Some machines are equipped with a totalizer for adding the new balances as written, as well as the items posted and the old balances picked up. However, this affords no check upon the accuracy of picking up the old balance. The total of the new balances as copied, it is true, is equal to the sum of the amounts in the old balance and the debit registers, but that does not show that the sum in the old balance register is correct. This method does not prove the old balances were copied correctly, but only that the cross-footing mechanism was added correctly.

The accompanying form (Illustration No. 190) shows a ledger page on which the old balance was picked up and written twice, once as a "Proving Balance" and once as an "Old Balance." The two registers totaling these columns should show identical totals when the posting to each account is completed. This method assumes that the same error in reading or writing the old balances will not be repeated, even though the two copyings occur within a few seconds of each other. Writing the figures which intervene between the two copyings is expected to obliterate any tendency to repeat the same error. Of course, the second copying must be done from the "Balance" column, and not from the figures just written. The two copies of the old balance are always on the same sheet for comparison and checking purposes. Obviously, if the same error is made in both pick-ups, this method will not detect the error. Further, it represents no saving of time over the predetermined total methods.

sion total of the items posted is run and submitted to the head bookkeeper. This total should agree with the division total previously reported to him, and thus he knows whether the posting was correct or whether an error has been made. The division control sheet is not posted until the head bookkeeper accepts the total submitted as correct.

The methods of handling credit postings and controlling them are identical with those for handling debit postings. The batch total of cash remittance slips probably accompanies the slips, though usually the bookkeeping department chooses to run its own total of all items sent in. The subdivision of these batches into binder sections and the succeeding operations are identical, whether cash, returned sales, purchase invoices, returned purchases, or remittances are to be posted.

If the ledgers are arranged upon a geographical basis, then the sorting is on this same basis, though the auditing or sales department has probably done this work; but the control figures are obtained in the same way and the head bookkeeper has an independently derived total to check against the reports from the machine operators. In some offices the head bookkeeper chooses to hold the totals for each binder. In that case the individual binder control sheet is not posted until the total has been accepted by the head bookkeeper, for the figures he holds are not usually given to the machine operators.

The predetermined totals in some offices are run upon an ordinary adding machine tape, but such tapes are not usually labeled and are not convenient for handling or storing. A better plan is to run all amounts which may enter into the posting upon sheets which can be kept until any necessary checking has been done. When such sheets are used, the proof runs are made beside the predetermined runs to simplify checking.

Statistical Analysis

In modern business management it has been found desirable to have statistical data to use as a basis for judging past operations and for planning future operations. To obtain this data in the desired form, it is necessary to collect, classify and summarize information. In recent years it has been found to be economical to use machines for this purpose. The most widely used of these machines are known as *tabulating* machines. In the following discussion one type of tabulating machine will be discussed.

Equipment Necessary for Tabulating Work

To perform tabulating work it is necessary to have the following: (1) tabulating card, (2) key punch, (3) sorter, (4) tabulator. Each of these will be discussed briefly.

Tabulating Card

The tabulating card can be ruled to show a variety of information. A tabulating card ruled to use in making a classification of sales would contain columnar headings showing the different classes of information with reference to sales which it is desired to obtain. The method of showing the analysis within each class is explained in the discussion of the next topic.

The tabulating card must be of uniform size, but it can be ruled in a variety of ways so as to show the particular information desired with reference to the analysis for which it is used.

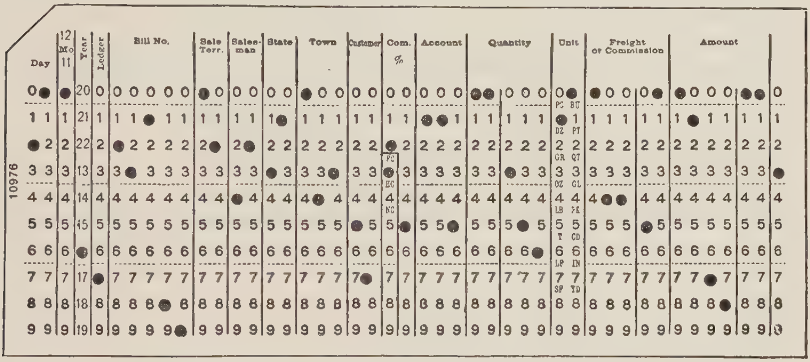

Illustration No. 192, Tabulating Card

The Key Punch

The information desired on the tabulating card is recorded by placing the card in a key punch, and punching in each column the numbers which designate the information to be recorded. For instance, it may be desired to show that the sale which is being recorded was made by James Brown to whom has been assigned the number "42." In this case, "42" will be punched in the column headed "salesman." In the same manner in each column the numbers will be punched which refer to the item of information which it is desired to record. The information recorded on the cards can be obtained from invoices or any other voucher or record which provides the necessary data.

The Sorter

As the cards are punched, they are filed. At the end of the period of time for which the data are being collected, usually one month, the cards are run through a sorter. The cards are fed into the sorter by the operator and it sorts them according to one of the classifications shown by the columnar headings on the cards. For example, the machine may be set to sort the cards

by salesmen. In this case the cards will be assembled by salesmen so that when the process is completed all the cards showing sales by each respective salesman will be in a separate group. For example, the cards which have been punched to show "42," the number of James Brown, will be in one group and the cards which have been punched to show "25," the number of Henry Jones, will be in another group, etc.

The Tabulator

After the cards are sorted, they are run through the tabulator and the total of each group obtained. To illustrate, if they have been sorted by salesmen, they will be run through the tabulator to determine the sales of each salesman. In the same manner, they are sorted and tabulated for each class of information shown by the columnar headings on the tabulating card.

Analyses for Which Tabulating Machines Are Used

Some of the most important analyses made by tabulating machines are: Sales, Purchases, Labor, Materials, Production, Sales Possibilities, Inventory, Expense. The uses for tabulating equipment, however, are almost infinite.

Advantages of Tabulating Equipment

The advantages derived from the use of tabulating equipment are (1) accuracy, (2) speed, (3) economy.

The only chance for error in the tabulating process is in the punching of the cards. This is a comparatively simple process and an efficient operator rarely makes errors. Much greater accuracy can be obtained, therefore, by the use of the machine than when tabulating work is done by hand.

Speed is essentially a vital factor in securing important data, for if figures are not available for use when desired, their value is greatly diminished. Statistics can be classified and summarized much more rapidly by machines than by hand. The sorting machine separates punched holes at the rate of 250 cards per minute, and the tabulator adds from one to five amounts at the rate of 150 per minute for each counter, or an aggregate of 750 amounts per minute for all counters combined.

Good business demands economy. Lost time is an expense. Tabulating machines not only facilitate the gathering of information, but gather it at a minimum of cost. Time studies have shown that whenever more than two classifications of information is desired, it is more rapid and economical to use tabulating equipment. This is on the assumption that a sufficient quantity of work is to be handled to prevent the overhead charges involved in the use of machines from being excessive.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain the meaning of "balance ledger" posting.

— 2 —

Why is the "balance ledger" desirable?

— 3 —

Assuming figures, illustrate how such a ledger operates.

— 4 —

In what ways may errors occur in balance ledger posting?

— 5 —

Explain the methods which may be employed to detect each of these errors.

— 6 —

What objection may be offered to the "predetermined total of old balances check" as a means of determining the accuracy of the pick-up of the old balances.

— 7 —

Explain the organization of the accounts receivable records where there are several thousand accounts receivable accounts.

— 8 —

What control is necessary to exercise an effective check over such an organization?

— 9 —

Explain how an effective control may be exercised over the various vouchers which are received by the Accounts Receivable Section from the various other departments and sections.

— 10 —

In what ways may the accounts in the accounts receivable ledgers be classified?

— 11 —

Explain how these methods may be combined.

— 12 —

What objections may be offered to running the predetermined totals on adding machine tape?

— 13 —

In what way does the head bookkeeper obtain the entries for posting to the Accounts Receivable account in the general ledger?

— 14 —

Why are tabulating machines desirable?

— 15 —

Explain the use of the following: tabulating card, key punch, sorter, tabulator.

— 16 —

When are the tabulating cards punched? How is the information obtained which is recorded on the card?

— 17 —

State a number of purposes for which tabulating equipment may be used.

— 18 —

Explain possible analyses which may be made of the following by use of tabulating equipment:

1. Purchases.
2. Sales.
3. Inventory
4. Expenses.

— 19 —

State the advantages derived from the use of tabulating equipment.

— 20 —

State when its use may not be desirable.

CHAPTER LXXIV

THE PERIODIC SUMMARY

Purpose of the Periodic Summary

In the preceding chapters considerable attention has been given to the preparation and interpretation of financial reports for the use of the executives of a business. Although these reports may be made in various forms, they all can be classified as one of two kinds: (a) those which show the financial condition of the business at a specific time, and (b) those which show the results of the operations of the business for a specific period of time. To make possible the preparation of these reports it is necessary to divide the life of the business into periods of time, known as *fiscal periods*, and to make the records from which the reports are prepared show this division. This necessitates that at the end of each fiscal period the records be adjusted to show the true financial condition of the business at that time, and that a summary of the period's operations be made in such form as to separate these operations from those of the next period.

Periodic Adjustment of the Accounts

At the end of any fiscal period, there are always facts concerning the financial status of the business which have not been recorded in the ledger accounts, but which must, nevertheless, be considered if the financial reports are to be complete and accurate in their showing. Thus some of the assets may be worth less than the value at which they appear on the books. There may be certain items which really exist as assets of the business, but which have not been entered on the books, since no transaction has arisen to cause such entries to be made. In the same way, liabilities may have arisen which have not yet been represented by a voucher and which have, therefore, not been recorded. Income may have been earned or expense incurred without giving rise to an entry; or there may be items standing on the books as expense which are not properly chargeable against the earnings of the current fiscal period. Sometimes, also, credits are entered on the books for income which is not properly to be considered as an earning of the current fiscal period.

A correct statement of the financial condition and the result of the operations of the period requires that such facts, so far as they can be ascertained, be recognized and recorded. The items of this kind which must usually be considered may be classified as follows:

(1) Loss on bad debts
(2) Depreciation of fixed assets
(3) Accrued income
(4) Accrued expense
(5) Deferred charges to expense
(6) Deferred credits to income

It is assumed that the student is to some extent familiar with the nature of these items and the method of recording them. Their proper record is regarded as of sufficient importance, however, to be worthy of a brief review.

Loss on Bad Debts

The estimated loss on bad debts is shown on the Balance Sheet as a deduction from Accounts Receivable. It is shown on the Statement of Profit and Loss as an administrative expense. It is recorded by means of a journal entry which debits Loss on Bad Debts and credits Reserve for Bad Debts.

In estimating the amount of the reserve for bad debts, resort must be had to the statistics of previous periods. Two methods may be followed in making this estimate. By the first method, the ratio of the bad debts of previous periods to the sales of these periods is obtained, and this ratio is applied to the sales of the current period to estimate the probable bad debts which will arise as a result of the sales of this period. By the second method, the ratio of the bad debts of previous periods to the accounts receivable outstanding at the beginning of the period is obtained, and this ratio is applied to the accounts receivable outstanding at the time of calculation of the present allowance. Either method is usually satisfactory if followed consistently, but the former method is usually preferable, for it is most convenient to have all items which are to be deducted from gross income shown as a percentage of gross sales. This facilitates the presentation of comparative data.

It must be understood that there may be conditions under which statistics of past periods may not be satisfactory in estimating the loss on bad debts which will arise during the next period. In some cases it is necessary to consider each customer's account separately and arrive at a conclusion concerning the probable loss, if any, which may be incurred in its collection. By this means the total probable loss is estimated and recorded as the anticipated loss on bad debts.

Depreciation on Fixed Assets

Depreciation on a fixed asset is shown on the Balance Sheet as a deduction from the asset. It is shown on the Statement of Profit and Loss as an expense of the department using the property on which the depreciation has occurred. It is recorded at the end of the fiscal period by means of a journal entry which debits the departmental expense account to which it is chargeable and credits the Reserve for Depreciation account maintained with the asset on which the depreciation is calculated. The method of calculating depreciation and the operation of the Reserve for Depreciation account has been explained in Chapter XXXI.

Accrued Income

To state correctly the income of a given fiscal period, all the income which has been earned by the business during the period must be included in the statement. Income may be earned during one period which does not become due and payable until some time which falls in a later fiscal period. In the normal course of procedure, such items are not entered in the books until they become payable, since no voucher arises as a basis of such entry. At the end of an accounting period, however, they must be recognized and recorded if the income is to be properly apportioned between periods.

An illustration of such income is to be found in the case of interest on notes receivable. Thus, if the business accepts a customer's sixty-day note for $1,000.00, with interest at 6%, dated December 1, and continues to hold this note until December 31, the day of closing the books, it is apparent that one month's interest, or $5.00, has been earned during the period just ended. On December 31 the claim of the business for this amount should be shown on the Balance Sheet as an asset and on the Statement of Profit and Loss as an earning of the period.

If this item of accrued interest is to appear in the financial reports, it should also appear in the accounts if the Balance Sheet and the Statement of Profit and Loss are to reflect the financial facts shown in the accounts. To bring this item into the accounts, there must be a debit made to an asset account called Accrued Interest Receivable, and a credit to the income account, Interest on Notes Receivable.

The foregoing discussion of the treatment of accrued interest receivable applies to other items of accrued income. If there are a number of such items at the end of a period, it is not necessary to carry a separate account for each kind of income accrued. It is usually sufficient to carry a single account with Accrued Income and show the individual items in the explanation column.

Accrued Expense

At the end of each fiscal period, there are usually some services which have been received by the business for which payment will not be due until some time in the following period. In the normal course of business procedure during a fiscal period, no entry is made on the books for either the expense or the liability until the latter becomes payable or some voucher arises to serve as a basis of such entry. The most common example of such an accrued expense item is to be found in the pay roll. Assuming that wages are paid on Saturday and that the fiscal period ends on Wednesday, it is evident that on the date of closing the records the business has incurred as an item of expense the cost of three days' wages, and that this item should be shown on the Statement of Profit and Loss as an expense and on the Balance Sheet as a liability.

To enter such items of accrued expense in the accounts, it is necessary to make a journal entry by which the appropriate expense account is debited and the appropriate liability account is credited. In the foregoing illustration, the Salaries account of the department in which the employees work will be debited and Accrued Wages account will be credited. If there are several items of accrued expense, they may all be credited to one account entitled Accrued Liabilities, and the individual items shown in the explanation column.

In addition to accrued wages, there are often accrued interest and accrued taxes at the end of the fiscal period. If these exist, their amount should be ascertained, the appropriate expense accounts debited, and the appropriate liability accounts credited.

Deferred Charges to Expense

It very often happens that a business pays in advance for the right to receive a certain service or purchases certain kinds of supplies in sufficient quantity to last for some time. At the end of the fiscal period, the services not yet received or the supplies not yet used, should not be charged as an expense of the current period, but should be carried forward and treated as an expense of the following period. Such items are termed "Deferred Charges to Expense". Some examples of deferred charges are prepaid interest, prepaid insurance, and office supplies remaining on hand at the end of a period.

Such supplies and services unconsumed at the close of the fiscal period are shown on the asset side of the Balance Sheet as a deferred charge to expense. The used portion is shown on the Statement of Profit and Loss as an expense. One of two methods may be employed to show these facts in the accounts, as discussed on page 1131.

(1) Purchases of these supplies and services are debited to an asset account. At the end of the fiscal period, the *used* portion is credited to this account and debited to an appropriate expense account.

(2) Purchases of such items are debited to the expense account which will be affected by their use. At the end of the fiscal period, the *unused* portion is credited to this account and debited to an asset account. Each item of prepaid expense may be debited to a separate asset account—for example, Prepaid Insurance, Office Supplies on Hand, etc.; or the individual items may all be debited to one account with Deferred Charges to Expense.

Both methods produce the same result, that is, the unused portion of the supplies or services appears in an asset account, the balance of which is shown on the Balance Sheet as a deferred charge to expense; and the used portion appears in an expense account, the balance of which is shown on the Statement of Profit and Loss as one of the costs of the period.

Deferred Credits to Income

Income is sometimes received during one period which has not been earned by the business during that period, but will be earned in a following fiscal period. Such items of income are known as "Deferred Credits to Income". Examples of such deferred credits are to be found in the case of a publishing firm which receives subscriptions to its publications paid in advance for a period of time which runs past the end of the current period. Another example is the case of a commercial bank which discounts the note of a customer, deducting in advance the amount of the interest which may be charged for a period which runs beyond the end of the fiscal period.

At the end of the fiscal period it is necessary to show the earned income as an income of the current period on the Statement of Profit and Loss, and the unearned income as a liability on the Balance Sheet. This may be shown in the accounts in two ways:

(1) Income received in advance is credited to a liability account, on the theory that a firm is liable to the parties from whom the payments have been received for the service due them. At the end of the fiscal period, the *earned* portion is debited to this account and credited to an appropriate income account.

(2) Income received in advance is credited to an income account. At the end of the fiscal period, the

unearned portion is debited to this account and credited to a liability account. Each item of income received in advance may be credited to a separate liability account—for example, Unearned Rent Received, Unearned Tuition Received, etc.; or the individual items may all be credited to one account with Deferred Credits to Income.

Both methods accomplish the same result, that is, the unearned income received in advance appears in a liability account, the balance of which is shown on the Balance Sheet as a deferred credit to income; and the earned portion appears in an income account, the balance of which is shown on the Statement of Profit and Loss as one of the incomes of the period.

Periodic Closing of the Accounts

After the entries discussed in the foregoing paragraphs have been made, the accounts will reflect the financial condition of the business as of the date of the entries. It is then necessary to *close* the income and expense accounts that the income and expenses of the business for the past period may be clearly separated from the income and expenses of the following period. To effect this, it is necessary to transfer the balance of each income and expense account to one or more summary accounts.

In a manufacturing business all the accounts relating to the manufacturing operations will be transferred to the Manufacturing account. The balance of the Manufacturing account will show the cost of goods manufactured. This balance may be disposed of in two ways. By the first method it will be transferred to the debit of the Finished Goods account. This account will be debited with the inventory of finished goods at the beginning of the period and credited with the inventory of finished goods at the end of the period. The balance of the Finished Goods account will then show the cost of goods sold and may be transferred to a Cost of Sales account, which will then be closed into the Trading account, or it may be transferred directly to the Trading account. By the second method, the balance of the Manufacturing account is transferred directly to the Trading account, and this account is debited with the beginning inventory of finished goods and credited with the ending inventory.

Whichever method of closing the Manufacturing account is employed, the Trading account shows the cost of goods sold. It is then credited with the balance of the Sales account, and the balances of all other accounts which show information with reference to the trading operations of the business are closed into the Trading account. The balance of the Trading account shows

the gross profit on sales. This is transferred to the credit of the Profit and Loss account. The Profit and Loss account is debited with the balance of each of the expense accounts and credited with each of the miscellaneous income accounts. The balance of this account then shows the net income for the fiscal period.

In a trading business the Manufacturing account will be eliminated and the balance of the account or accounts maintained with purchases will be transferred to the debit of the Trading account. The Trading account will be debited with the beginning inventory and credited with the ending inventory. The remainder of the procedure will be the same as that outlined for a manufacturing business. The procedure to be followed by both a manufacturing and a trading business is illustrated below:

A. MANUFACTURING BUSINESS

Manufacturing Account[1]

DEBIT:
- At the close of each fiscal period:
  - With goods in process at the beginning of the period.
  - With cost of materials used.
  - With cost of direct labor.
  - With manufacturing expenses applicable to the period.

CREDIT:
- At the close of each fiscal period:
  - With the cost of goods in process.
  - The balance shows the cost of goods manufactured and is transferred to the debit of the Trading account.

Trading Account

DEBIT:
- With the inventory of finished goods at the beginning of the period.
- With the cost of goods manufactured during the period.
- With sales returns and allowances.

CREDIT:
- With the inventory of finished goods at the end of the period.
- With the sales for the period.
- The balance of this account shows the gross profit on sales and is transferred to the credit of the Profit and Loss account.

Profit and Loss Account

DEBIT:
- With the balance of each of the expense accounts, such as Depreciation on Office Equipment, Office Salaries, Loss on Bad Debts, Salesmen's Salaries, Advertising, etc.

CREDIT:
- With the gross profit on sales.
- With the balances of all miscellaneous income accounts.
- The balance of this account shows the net income for the fiscal period.

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[1]When a "production order cost system" is in use, a Work in Process account will take the place of the Manufacturing account. The closing entries to be made under these conditions are explained and illustrated in Chapter XLVI.

B. TRADING BUSINESS

Trading Account

Debit:	Credit:
With the inventory at the beginning of the period.	With the sales for the period.
With the cost of purchases for the period.	With purchases returns and purchases allowances.
With sales returns and sales allowances.	With the inventory at the end of the period.
With Freight In on purchases.	The balance shows the gross profit on sales and is transferred to the Profit and Loss account.

Profit and Loss Account

Debit:	Credit:
With the balance of each of the expense accounts, such as Depreciation on Office Equipment, Office Salaries, Loss on Bad Debts, Salesmen's Salaries, Advertising, etc.	With the gross profit on sales.
	With the balances of all miscellaneous income accounts.
	The balance of this account shows the net income for the fiscal period.

Post-closing Entries

After the periodic adjusting and closing entries are made, certain adjustments are usually made before the entries for the next period are posted to the ledger. These adjustments may be necessary in connection with (1) accrued income; (2) accrued expense; (3) deferred charges to expense; and (4) deferred credits to income. To illustrate the method of making these adjustments, the handling of accrued income will be discussed and illustrated.

Accrued income is recorded by debiting an accrual account and crediting the income account to which the income belongs. When the income is collected, it should be credited against the accrual. Usually the income collected will not be the same as the accrual, for it will be for the accrual, plus the income earned between the close of the fiscal period and the payment. If the accrued income is left in the accrual account, it is necessary when the payment of the income is received to allocate the receipt between the accrual account and the income account. To avoid this, it is customary to transfer the accrual back to the income account as soon as the closing entries are completed. To illustrate, a four months' note for $2,000.00 with interest at 6%, is received on November 1. When the books are closed on December 31, $20.00 of interest has accrued and the following entry will be made:

		Accrued Interest Receivable.........	20	
		Interest Earned..................		20

After the books are closed, this entry will be reversed by the following one:

		Interest Earned	20	
		Accrued Interest Receivable		20

When the $40.00 interest is received on March 1, the following entry will be made:

		Cash	40	
		Interest Earned		40

The Interest Earned account will then appear as follows:

INTEREST EARNED

192 Jan.	1			20	192 Mar.	1			40

The balance of $20.00 shows the correct earnings for the year in which the interest is received.

In the same manner and for similar reasons, accrued expenses are transferred back to the expense accounts to which they belong.

If the first method outlined for handling deferred charges to expense and deferred credits to income is employed, no post-closing adjustments are necessary. If the second method is employed, it is necessary to make entries reversing the entries made when the deferred charges to expense and deferred credits to income accounts were set up.

The student should be able to determine easily the entries necessary to adjust the accrued expense, deferred charges to expense, and deferred credits to income accounts by comparing this procedure with the detailed procedure given for accrued income. If he has any difficulty, he should read Chapter XXXII.

Disposition of Net Profit

The balance of the Profit and Loss account shows the net profit for the period. From this profit the following appropriations may be made:

(1) Income taxes.
(2) Proprietorship reserves.
(3) Dividends.

The balance, after making these reservations, is carried to the Surplus account.

Property taxes are operating expenses and must be entered before arriving at net income, but income taxes are a levy on income and can not be calculated until the net income is determined. They must be calculated before proprietorship reserves or dividends are considered. After the amount of the income taxes are determined, an entry should be made as follows:

Profit and Loss....................		
Accrued Income Taxes..........		....

In many cases the estimated income taxes are shown as "Reserve for Taxes." This is an improper use of the term "reserve," since they constitute a liability and should be so shown. When the taxes are paid, Accrued Income Taxes will be debited.

The meaning of a *proprietorship* reserve and its distinction from a *valuation* reserve has been explained previously. Valuation reserves, like reserves for depreciation and bad debts, are set up by a debit to expense, but proprietorship reserves represent merely *appropriated* profits and are set up by a debit to Profit and Loss. The most frequent of these reserves is Reserve for Bond Sinking Fund. Bonds are issued with an agreement that a certain amount of profits are to be carried to a Reserve for Sinking Fund each year during the life of the bonds. At the end of each year, the following entry will be made:

Profit and Loss....................		
Reserve for Bond Sinking Fund..		....

When the bonds are paid, the Reserve for Bond Sinking Fund will be transferred to the Surplus account.

The mortgage under which bonds are issued may provide for the setting aside each year of a certain amount of cash which is to be used to pay the bonds at maturity. In most cases these funds are deposited with a trustee, who holds them for the benefit of the bond-holders. The trustee usually invests these funds and adds the income thus obtained to the principal. By this means the amount of cash to be set aside becomes less each year. For example, if $20,000.00 of bonds are issued, payable in twenty years, with a provision in the mortgage for their redemption from a fund created by yearly installments, it will be necessary to set aside $1,000.00 each year if the funds are not to be invested. If the funds are invested, however, something less than $1,000.00 a year can be set aside, since the funds set aside each year will bear interest for the remaining years of the life of the bonds. By means of tables, known as *bond tables*, it is easy to calculate the amount which must be put in the fund each year.

When cash or its equivalent is put into a fund to provide for the redemption of bonds, it is termed a *bond sinking fund.* Some times *reserves* are confused with *funds.* For example, the *Reserve for Bond Sinking Fund* may be confused with the *Bond Sinking Fund.* If the method of establishing the two are considered, there should be no confusion. As previously explained, if a mortgage provides for a reserve for sinking fund, the *reserve* is set up by a debit to Profit and Loss, and as credit to the reserve account. On the other hand, if the mortgage provides for a sinking fund, this is established by the following entry:

Bond Sinking Fund........................	....	
Cash........................		....

The bond sinking fund represents cash or its equivalent. It is shown on the Balance Sheet as an asset. The reserve represents appropriated or specially designated profits or surplus and is shown on the Balance Sheet as part of the net worth or proprietorship. If a sinking fund is established, the following entry is made when the bonds are paid:

Bonds Payable........................	....	
Bond Sinking Fund.............		....

This results in the removal of the sinking fund from the accounts.

When dividends are declared, they may be debited to Profit and Loss or to Surplus, depending on whether the Profit and Loss account is closed before the dividends are declared. If the dividends are to be charged against the Profit and Loss account, the following entry is made:

Profit and Loss........................	....	
Dividends Payable.............		....

When the dividends are paid, the entry is:

Dividends Payable........................	....	
Cash........................		....

The balance of the Profit and Loss account after making provision for income taxes, proprietorship reserves, and dividends is transferred to the Surplus account by the following entry:

Profit and Loss........................	....	
Surplus.....................		....

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain and illustrate fully the difference between adjusting entries and closing entries.

— 2 —

What difference, if any, is there between a calendar and a fiscal year? Why is the life of a business not measured always by the calendar year?

— 3 —

The Trial Balance of the Towne & Hanson Company contains, among others, the following accounts at the end of the fiscal year:

Cash	Notes Payable
Accounts Receivable	Accounts Payable
Notes Receivable	Bonds Payable
Merchandise Inventory	Reserve for Sinking Fund
Building	Capital Stock
Land	Surplus
Store Equipment	Selling Expense
Office Equipment	General Expense

What adjustments will probably be necessary before these accounts will reflect the true condition of the business?

— 4 —

Previous to this time, the Towne & Hanson Company has made no provision for the losses arising from bad debts. It is decided to make such a provision at the end of the present fiscal year. You are requested to determine the amount of this provision. Explain how you would proceed.

— 5 —

On the ledger of the X Company there appears a Depreciation account which shows a balance of $3,600.00. An analysis of the entries made in this account shows that its balance represents the following: (a) Depreciation on Factory Equipment, $2,000.00; (b) Depreciation on Building Used for Administrative Offices, $800.00; (c) Depreciation on Office Furniture, $400.00; (d) Depreciation on Trucks, $400.00.

The trucks are used one-half of the time in delivering to the railroad station sales made to customers, and the remainder of the time in transporting incoming purchases of raw materials.

State your objection to the method of recording depreciation which is employed by this company, and explain how you would proceed to adjust this account to remove your objections.

— 6 —

You have been employed by the Douglas Mercantile Company to supervise the work of the bookkeeper in making the periodical summary of its accounts. You find that the company has large holdings of interest-bearing notes, stocks and bonds, and that it also has property from which it receives rent. Consequently it has numerous items of accrued income at the end of the fiscal period. How would you instruct the bookkeeper to show these in the accounts?

— 7 —

The bookkeeper objects to the opening of numerous accounts with accrued income. Explain how you might meet his objection.

— 8 —

You find that the Douglas Mercantile Company has taxes accrued on its property and merchandise stock to the amount of $250.00, and you estimate that the income taxes due from the company will amount to $1,500.00. Explain how you would instruct the bookkeeper to record each of these items.

— 9 —

You find that the Douglas Mercantile Company has a large stock of wrapping paper, twine, and other supplies of a similar nature which have been charged to a Supplies account when purchased. An inventory of these supplies shows their value at the end of the year to be $3,600.00. The purchases during the year as shown by the Supplies account amount to $12,000.00. Explain and illustrate two ways in which the Supplies account can be adjusted at the time of the periodical closing.

— 10 —

The New York Newspaper Company receives subscriptions in advance from its subscribers. It credits these to an income account entitled "Subscriptions". Upon examination at the end of the fiscal period, you find that the subscribers have received but one-half of the service to which they are entitled by the company. Explain how you would adjust the Subscription account at the time of the periodical closing.

— 11 —

Explain fully the accounts which should be employed for summarizing the expense and income accounts of a manufacturing business at the end of the fiscal period, stating for what each should be debited and credited, what the balance represents, and the disposition of this balance.

— 12 —

Explain fully the accounts which should be employed for summarizing the expenses and income accounts of a trading business at the end of the fiscal period, stating for what each should be debited and credited, what the balance represents, and the disposition of this balance.

— 13 —

On March 1, the Lloyd-Jones Company receives $60.00 interest on a four months' note which the company received from a customer on November 1. The fiscal year of the Lloyd-Jones Company ends on December 31. Explain how this interest will be recorded.

— 14 —

The net profits of the Reed-Prentice Company for the year 1927 are $100,000.00. Explain and illustrate the possible disposition of these net profits.

— 15 —

The King Manufacturing Company has outstanding $20,000.00 of twenty-year bonds, which are secured by a mortgage on its factory. The mortgage provides that at the end of each fiscal period a reserve for sinking fund shall be established equal to 1/20 of the par value of the bonds. It also provides that an equal amount of cash shall be set aside in a sinking fund which is placed in the hands of a trustee. Explain the method by which each of these is set up in the accounts at the end of the year.

— 16 —

At the end of the twenty years the King Company pays the bonds mentioned in Question 15. Explain the entries which will be made at that time in connection with the bonds, the sinking fund, and the reserve for sinking fund.

LABORATORY MATERIAL

Exercise No. 260

The Trial Balance of the Hyatt Manufacturing Company on December 31, 19. ., is as follows:

THE HYATT MANUFACTURING COMPANY

Trial Balance, December 31, 19. . . .

Cash	5,000	
Bills Receivable	4,000	
Bills Payable		16,000
Sales		250,000
Materials and Supplies Purchased	52,000	
Sundry Merchandise Bought	3,000	
Selling Wages	22,000	
Manufacturing Wages	88,000	
Sale of Raw Material		500
Office Salaries	6,000	
Manufacturing Expenses	15,000	
Office Expenses	3,000	
Selling Expenses	3,000	
Advertising	2,000	
Light, Heat and Power	3,000	
Rent of Factory	4,000	
Rent of Store and Office	2,000	
Repairs to Machinery	1,000	
Delivery Expenses	2,000	
Interest and Discount	800	
Commissions Paid	5,000	
Machinery and Tools	150,000	
Furniture and Fixtures	12,000	
Book Accounts Receivable	60,000	
Book Accounts Payable		18,000
Expenses of Incorporation	500	
Reserve for Doubtful Accounts	500	
Stocks and Bonds	20,000	
Goodwill	50,000	
Capital Stock		200,000
Surplus		29,300
	513,800	513,800

Investigation of the records and supporting documents of the company discloses the following:

(1) Inventories:

(a) Finished Goods $10,000.00

(b) Work in Process 5,000.00

(c) Material and Supplies 3,000.00

There were no inventories of Finished Goods or Work in Process at the beginning of the year. There was an inventory of Raw Materials of $2,000.00 at the beginning of the year, which was charged to the Materials and Supplies Purchased account.

(2) DEPRECIATION:

(a) Machinery and Tools.......20% of book value
(b) Furniture and Fixtures.....10% of book value

(3) LOSS ON BAD DEBTS:

(a) Estimated to be 2% of sales for the year.

(4) ACCRUALS:

(a)	Interest on Notes Receivable.........	$200.00
(b)	Interest on Bonds Owned............	150.00
(c)	Interest on Notes Payable............	100.00
(d)	Factory Wages......................	400.00
(e)	Office Salaries......................	200.00
(f)	Sales Salaries......................	500.00
(g)	Commissions.......................	800.00

(5) STOCKS AND BONDS:

This item represents:

(a) Stocks of the Brown Manufacturing Co., $8,000.00
(b) Bonds of the Jones Mercantile Co., $12,000.00

INSTRUCTIONS: 1. Construct a Trial Balance for the Hyatt Manufacturing Company arranging the items in the order in which you think they should appear and using the terminology which you think desirable.

2. Prepare entries to give effect to the foregoing adjustments.

3. Prepare a Balance Sheet and a Statement of Profit and Loss.

4. Prepare closing entries.

5. Set up the ledger accounts which would be required to show the periodical summary of the expense and income accounts of the company.

6. Prepare post-closing entries.

Exercise No. 261

The Crawford Manufacturing Company has outstanding $100,000.00 twenty-year 6 per cent bonds. Its outstanding stock is (a) 6 per cent cumulative preferred, $200,000.00, (b) common, $300,000.00. The mortgage under which the bonds are issued provides the following:

(a) That at the end of each fiscal period there shall be credited to a Reserve for Bond Sinking Fund an amount equal to 5 per cent of the par value of the bonds.

(b) That the same amount of cash is to be transferred to a Sinking Fund to be maintained for the payment of the bonds at maturity.

The charter of the corporation provides

(a) That the preferred stock is to receive a 6 per cent dividend before the common stock receives any dividend.

(b) That after the common stock receives a 6 per cent dividend, the preferred and common stock shares equally in the distribution of profits until they each receive a total dividend of 9 per cent, after which the common stock may receive such further dividends as the directors may desire without further participation of the preferred.

The net operating profit of the company for the year is $250,000.00. The estimated income taxes for the year are $30,000.00. No dividends have been declared on the preferred stock for two years. The directors declare the necessary dividends on the preferred stock and a 10 per cent dividend on the common.

INSTRUCTIONS: 1. Make the journal entries to show the distribution of the net profits of the year.

Exercise No. 262

The Trial Balance of Griffin & Company on December 31, 19.., is as follows:

GRIFFIN & COMPANY

TRIAL BALANCE, DECEMBER 31, 19....

Cash	10,000	
Notes Receivable	20,000	
Accounts Receivable	25,000	
Notes Payable		3,000
Accounts Payable		14,000
Merchandise Inventory	55,000	
Store Property	40,000	
Bonds Payable 5% 10-year		10,000
Unimproved Real Estate	6,000	
Store Fixtures	5,000	
Reserve for Depreciation on Store Fixtures		500
Delivery Equipment	2,500	
Capital Stock		75,000
Surplus		71,300
Purchases	150,000	
Sales		152,000
Discounts		100
Rent on Hall over Store		200
Taxes	200	
Interest	1,000	
Heat and Light	400	
Salesmen's Salaries	5,000	
Officers' Salaries	4,000	
General Expense	2,000	
	326,100	326,100

Supplementary Data

(1) Merchandise Inventory at close of year, December 31, $30,000.00.

(2) Reserve for Bad Debts, 1% of Accounts Receivable Outstanding.

(3) Depreciation:

(a) Store Property, 5% of book value of building. (Building represents ¾ of value of store property.)

(b) Store Fixtures, 10% of book value.

(c) Delivery Equipment, 20% of book value.

(4) Accruals:

(a)	Interest on Notes Receivable	$300.00
(b)	Interest on Notes Payable	250.00
(c)	Interest on Bonds	200.00
(d)	Salesmen's Salaries	180.00

(5) Discounts:

An examination of the Discounts account shows that it has been debited during the year for $300.00 and credited for $400.00.

(6) Taxes:

$30.00 of the amount shown under taxes was paid on unimproved real estate, the remainder paid on the store property and merchandise stock.

(7) Bonds Payable:

The mortgage under which the bonds were issued provides that an amount equal to 5% of their par value shall be credited to a Reserve for Sinking Fund at the end of each fiscal period.

INSTRUCTIONS: 1. Make the adjusting entries.

2. Prepare a Balance Sheet.
3. Prepare a Statement of Profit and Loss.
4. Make the closing entries.
5. Make the post-closing entries.

CHAPTER LXXV

ORGANIZATION FOR ACCOUNTING CONTROL

Need for Accounting Organization

The preceding chapters have emphasized the use of accounting information in business management. The management of a business necessitates, among other things, the making of plans, the formulation of judgments, and the issuing of instructions on the procedure to be followed in carrying out these plans and judgments. Such plans, judgments, and instructions, to be trustworthy, must be based on accurate and comprehensive information, and this information must be obtained in large part from the accounting and statistical records of the business. Not only must these records be kept, but the information they contain must be analyzed, presented and interpreted, if proper judgments are to be made and proper action taken. That this may be accomplished, an organization must be set up on which responsibility for its accomplishment can be placed. It is the purpose of this chapter to discuss the nature of this organization and the method by which it performs its task.

The Accounting Organization

The organization for accounting control in any particular business must depend to a considerable extent upon the size of the business and the nature of its operations. A typical organization for a large manufacturing business is shown by Illustration No. 193.

In a small business there will not usually be a controller, and the executive head of the accounting department may be termed the *chief accountant, head of the accounting department,* or similar name. In a small business there may not be as many sections or divisions as are indicated by the chart given in Illustration No. 193, but the duties performed by these sections must be performed by some one in the accounting department.

The Duties of the Controller

The controller is one of the principal executives of the business. He is usually elected by the board of directors, but he

reports to the president. In some cases he is appointed by the president instead of the board of directors. That his work may be effective, he should have the same official rank as the executives in charge of sales, production and finance. Otherwise he is likely to have difficulty in obtaining the cooperation which is necessary for the successful accomplishment of his task.

The controller should be the final authority on accounting methods and procedure, but should not be directly responsible for the execution of these procedures. He should be held responsible for the interpretation of the accounting reports prepared and should submit recommendations based on these reports to the other executives of the company. He is responsible for the use of the accounts rather than for their construction.

The duties of the controller will vary, depending on the organization of the particular business. In some cases, in addition to performing the function of controller, he also performs the function of chief accountant. In other cases the duties ordinarily performed by the chief accountant may be performed by an assistant controller.

Organization of Controller's Department

As shown by Illustration No. 193, the controller frequently has under his jurisdiction in addition to accounting, auditing, budgets, statistics, office management, and methods and procedures. We are interested here only in the accounting division of his work. His relation to auditing and budgets will be discussed in subsequent chapters.

Relation of the Controller to the Chief Accountant

In general terms, it is the function of the controller to *direct*, and the function of the chief accountant to *perform*. In pursuance of this policy, the controller either outlines the classification of accounts and the supporting records which the company is to use, or approves those which have been prepared by the chief accountant. The chief accountant is responsible for the maintenance of the accounts and records after they have been authorized. The extent to which the controller exercises supervision over the work of the chief accountant depends upon the size of the corporation and the extent of the duties of the controller.

The chief accountant is responsible for the preparation of all the reports prepared from the accounting records. The controller may prescribe what these reports shall be and the form in which they are to be prepared, but the chief accountant is responsible for their preparation. This includes all the reports which go to the various executives, as well as those which go to the board of

directors. Usually the chief accountant submits these reports to the controller for his approval before they are distributed. In some cases the controller maintains a record of all the reports to be prepared and of the parties who are to receive each report. In this case, the reports are approved by the controller and distributed by his office. This affords a central control of the distribution of reports.

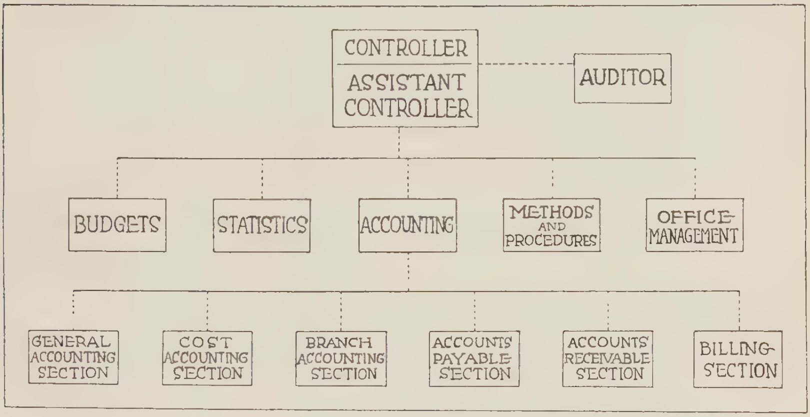

Illustration No. 193, Organization of Controller's Department

Chief Accountant

In every business there is some one who is vested with direct executive control of the accounting organization. The executive head of the accounting organization is known by various names. He may be called "chief accountant", "head of accounting department" or "office manager". Sometimes the head of the accounting division is called the "general auditor." This is not a satisfactory terminology for it is preferable to use the term general auditor to describe the party responsible for verifying the accuracy of the records. In some cases the controller of the company exercises direct and immediate supervision over the accounting department. This is not the true function of a controller, as has been explained in the foregoing discussion.

The terminology of accounting is not exact, and the titles employed to designate those employed in accounting work are not standardized. In the present discussion the term chief accountant is used to refer to the executive who is responsible for the proper keeping of the accounting records and the preparation of the necessary financial and statistical reports from these records.

To perform properly his function, the chief accountant, acting in cooperation with and under the direction of the controller, must accomplish the following:

(1) Preparation of the reports which are necessary to present the desired information to the executives. The preparation of such reports is one of the most important tasks which the chief accountant has to perform.

(2) Preparation of a classification of accounts which will provide for a proper analysis and classification of the information to be presented by means of reports to the executives. Without such a classification of accounts, the collection of accurate and systematized data is impossible.

(3) Preparation of a system of records which will serve as posting mediums to the accounts. Without such records it is impossible to collect and summarize effectively the information contained in the accounts.

(4) Preparation of standard journal voucher forms which will serve as a means of summarizing details and of transferring these details from the one who is originally responsible for them to the one who is to make a summarized record of them.

The preparation of such reports, accounts, records and vouchers involves the entire accounting process. In other words, it involves the process from the time a transaction is performed until the effect of that transaction on the business is presented by means of a report to the executives of the company.

It is customary for the chief accountant, in cooperation with the controller, to organize the accounting department into sections, to each of which he delegates a certain part of the work under his jurisdiction. Typical sections are indicated in the outline given in Illustration No. 193. In many cases there are additional sections in the accounting department such as the payroll section, tabulating section, etc. We have shown in Illustration No. 193 those which will typically be found in any manufacturing business. Of course a branch accounting section is necessary only where a company distributes its product by means of branches. The duties of each of these sections will be discussed briefly.

General Accounting Section

This section is sometimes called the General Ledger Section or the Corporation Accounting Section. It usually has control of the accounting work outlined on page 1149.

(1) The general ledger containing the accounts of the general office and controlling accounts for each of the branches or divisions of the company.

(2) The books of record which serve as posting mediums to the general ledger.

(3) The preparation of the periodic financial statements.

(4) The preparation of vouchers for all charges by the general office to the branches or other units of the company. These charges may be for interest on investment of the company in the branch, for the branch's share of the overhead expenses of the general office, and similar items.

Branch Accounting Section

The branch and intercompany accounting section has control of the following:

(1) The accounting records of each branch which are kept at the general office. The extent of these records depends upon the method of handling the branch accounts.

(2) The preparation of financial reports for the branches. This is on the assumption that the branch ledgers are kept at the general office. If not, there is no necessity for a branch accounting section, although in a large company there may be a section responsible for summarizing the reports submitted by the various branches.

Cost Accounting Section

This section may be called the Works Accounting or the Plant Accounting Section. It usually controls the following:

(1) The cost accounting ledger containing all the accounts relating to factory operations.

(2) The records of original entry which serve as posting mediums to the cost ledger.

(3) The detailed cost sheets which show the costs of individual orders or jobs.

(4) The preparation of the journal vouchers which summarize the operations for the month for the use of the general accounting section.

(5) The preparation of periodic expense analyses showing the departmental expenses of each of the production departments.

Accounts Payable Section

The Accounts Payable Section, which may also be called the Vouchers Payable Section or the Auditor of Disbursements Section, has control of the following:

(1) The vouchering of all invoices payable.

(2) The maintenance of the vouchers payable record which shows the voucher distribution.

(3) The preparation of checks in payment of the vouchers due.

(4) The maintenance of paid and unpaid voucher files.

(5) The preparation of the record of cash disbursements.

(6) The preparation of the journal vouchers which summarize the voucher distribution of the month for the use of the general accounting section.

Accounts Receivable Section

The Accounts Receivable Section has control of the following:

(1) The accounts receivable ledger showing the accounts of the customers of the general offices. If the accounts receivable of the branches are collected by the general office, the accounts receivable section will maintain an accounts receivable ledger for each branch.

(2) The preparation of monthly statements for the use of the credit department and for sending to customers.

Billing Section

The Billing Section has control of the following:

(1) The extension of all orders received from customers. If a separate pricing section is not maintained, the billing section will be required to enter the price on the order as well as make the extensions.

(2) The preparation of all invoices sent to customers or to branches.

The Interrelation of Sections

It is not intended that the statement of the duties of the various sections given in this discussion should be regarded as an arbitrary one. It is obvious that each business must organize its accounting department to fit its particular needs. The foregoing discussion is intended to be suggestive only. The duties performed by the various sections are closely related and many

of them can easily be shifted from one section to the other without difficulty. In a small business two or more of these sections may be combined. For example, the accounts receivable section and the billing section may be combined into one section. In very small companies all of the work outlined in this chapter may be performed by three or four people and no distinct divisions may be recognized.

It is necessary for some sections to obtain information from other sections in order to make their records. For example, the general accounting section must receive information from (a) the branch accounting section, (b) the cost accounting section, (c) the accounts payable section, and (d) the billing section, to make its records of original entry. In the same manner the cost accounting section must receive information from (a) the accounts payable section and (c) the payroll section, to make its records of original entry. It is customary to transfer information between sections by means of standard journal vouchers. The form of such a voucher is shown in Illustration No. 194.

JOURNAL VOUCHER

No. . . . .
Prepared by . . . . Date . . . .
Approved by . . . . Entered . . . .

Account and Explanation	General Ledger				Cost Ledger			
	Dr.	√	Cr.	√	Dr.	√	Cr.	√

Illustration No. 194, Journal Voucher

These vouchers can be filed in a loose-leaf binder by the section to which they are sent and used as posting mediums. Each voucher should have a number and a schedule should be prepared which shows the date on which it is to be transmitted. By this means an effective check can be maintained on the information which is necessary for the original records of each section.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain the relation between a well-organized accounting department and efficient business administration.

— 2 —

The controller is "responsible for the use of the accounts rather than for their construction." Explain.

— 3 —

Explain the relation of the controller to the chief accountant.

— 4 —

Classify the duties of the chief accountant in terms of the accounting process over which he has jurisdiction.

— 5 —

The credit manager desires to know the promptness with which John Brown, a customer of the company, has paid his invoices. To which section of the accounting department will he apply for this information?

— 6 —

The treasurer desires to know the accounts payable falling due during the next week. From which section of the accounting department will he seek this information? How will this section obtain the information?

— 7 —

The sales manager desires to know the unit cost of certain items to use as a basis of quoting prices on these. From which section will he request this information? How will this section obtain it?

— 8 —

The X Company decides to transfer the branch ledgers from the general office to the branches. What effect will this have on the branch accounting section of the accounting department?

— 9 —

The sales manager desires to obtain the following information:

(a) Sales made by each salesman.
(b) Sales made in each state.
(c) Sales made of each commodity.

How will he obtain this information?

— 10 —

The cashier is responsible for paying the factory employes each week. How does he determine the amount due each employe?

— 11 —

The treasurer is responsible for signing all checks issued. Who is responsible for the preparation of these checks? How does the treasurer know that the checks are prepared for the proper amount?

— 12 —

How does the general accounting section obtain the following:

(a) Its record of cash receipts?
(b) Its record of cash payments?
(c) Its record of purchases made?
(d) Its record of sales made?

— 13 —

How does the accounts receivable section obtain the following:

(a) The charges to each customer's account?
(b) The credits to each customer's account?

— 14 —

Explain and illustrate the relationship between the different sections of the accounting department. Explain how information is transferred from one section to another.

LABORATORY MATERIAL

Exercise No. 263

The Elliott Manufacturing Company has its factory and general offices at Chicago, Illinois. It has ten branches located in large cities. Its sales amount to $20,000,000 a year. You are employed to examine its accounting methods and to recommend such improvements as you think are necessary.

You find that the accounting department has gradually expanded from the time when the business was small without any definite plan or direction. The head of the accounting department has been employed by the company for many years, having been promoted from an inferior clerical position in the department. Out-of-date methods are employed by the department; there is a considerable duplication of work by different members of the department; much information of a useless nature is gathered by it, and much other information which it should provide is not obtained.

You determine that the following should be done:

1. A comptroller appointed who will be responsible for the accounting and statistical methods and procedures of the company.

2. That the comptroller should have:

(a) A staff of assistants who will make a detailed study of the desirable accounting and statistical methods which should be adopted and to supervise the installation of those which are approved.
(b) A general auditor who will be the responsible administrative head of the accounting department.

3. That the accounting department should be organized into the following sections:

(a) General Office Accounting Section.
(b) Branch Accounting Section.
(c) Cost Accounting Section.
(d) Tabulating Section.
(e) Payroll Section.
(f) Accounts Payable Section.
(g) Accounts Receivable Section.
(h) Billing Section.

4. That the branch ledgers should be maintained at the general office and the records of original entry at the branches.

INSTRUCTIONS: Write a report to the general manager of the company, stating your objections to the present accounting organization and methods and explaining the new organization which you recommended. State the duties which should be performed by the comptroller, his staff, the general auditor and each of the sections of the accounting department.

Exercise No. 264

The following transactions are performed by the Elliott Manufacturing Company during the month of January:

1. Sales by branches, $1,500,000.00.
   Customers are invoiced by the branches, goods shipped from branch inventories, and collections made by the branches.
2. Collections on account by branches, $1,230,000.00.
   Each branch has a working fund of $10,000.00, which is replenished by the general office. All collections are deposited to the credit of the general office.
3. Expenses paid by the branches, $120,000.00.
4. Merchandise shipped by the general office to the branches, $1,100,000.00.
   All merchandise is billed to the branches at cost.
5. Auto trucks purchased by the general office for the New York branch and paid for by the branch, $2,000.00.
6. Charged to the branches for the month by the general office for interest on investment, $18,000.00.
7. Charged to the branches by the general office for overhead expense at the general office, $10,000.00.
8. Sales made by the general office as shown by the billings of the billing section, $500,000.00. The billing section prepares invoices in triplicate. One is sent to the customer, one to the tabulating section, and one to the accounts receivable section.
9. Factory pay roll for the month, $100,000.00.
10. Accounts receivable collected by the general office, $400,000.00.
11. Purchases of raw materials by the general office, $300,000.00.
12. Raw materials requisitioned from stock for use in the factory, $350,000.00.
13. Cost of goods transferred from the factory to the finished goods room, $1,200,000.00.
14. General office expenses, $120.00. A voucher record is maintained by the company.
15. Machinery purchased by the general office for the factory, $25,000.00.

16. Accounts payable paid by the general office for the factory, $350,000.00. The factory accounts are maintained on the general ledger, but the detailed cost accounts are maintained by the cost accounting section.

INSTRUCTIONS: Explain in writing how each of these transactions will be handled by the Elliott Manufacturing Company, tracing the transaction from its origin until its effect is shown on the general ledger. In your explanation:

(a) State the section of the accounting department which will first have to deal with each transaction.

(b) State each section which will be affected by it and the manner in which it will be affected.

(c) Name each ledger on which the transaction will be shown, and show in journal form the entry to be made on the ledger.

Each group of transactions, such as sales, purchases, etc., will be regarded as one transaction for the purpose of this problem.

CHAPTER LXXVI

AUDITING

Relation of Auditing to Accounting

The preceding chapters have dealt with the construction of accounting records and the preparation and interpretation of reports prepared from these records. Accounting reports to be of value must be accurate, and in the designing and operating of accounting records every precaution should be taken to promote accuracy and to prevent errors. Experience has shown, however, that, regardless of the care exercised, errors are likely to occur. To reduce such errors to a minimum and to correct those which occur, it is expedient that a periodic verification of the accounting records be made. To prescribe the method and procedure by which this verification is to be made is the function of auditing. It can be seen, therefore, that accounting deals with the construction and maintenance of records and reports, while auditing deals with their verification.

Previous chapters have given extensive consideration to the work of the accountant. It is the purpose of this chapter and the chapter immediately following to consider the work of the auditor.

The Purpose of an Audit

The primary purpose of an audit is to verify the accuracy of accounting records and reports. In the process of verification any errors which may exist must be detected and corrected. In fact it is to guard against such errors that the audit is necessary. The errors which may be found in the accounting records and reports may be classified as follows:

(1) Errors of principle.
(2) Errors of omission.
(3) Errors of fraud.

Usually the most important errors which the auditor finds are those due to a failure to follow correct accounting principles. Items of expense may be charged to capital accounts; merchandise inventory may be valued at improper prices; no depreciation on fixed assets may have been taken; and credit balances in

accounts receivable may not have been classified as liabilities. These are but a few illustrations of the many errors which may arise from a lack of accounting and business knowledge on the part of those responsible for the accounting records. Usually the most useful service of the auditor is in the detection and correction of such errors so that the accounting records and reports will show the correct financial condition of the business.

Errors of omission are of two kinds: (a) failure to enter a transaction, and (b) failure to post. Errors of the first kind are difficult to detect unless the auditor makes a detailed audit and compares all vouchers with the books of original entry. The modern practice is to number the business vouchers of each class in consecutive order. For example, the sales invoices, the purchases invoices, the checks which show disbursements are each numbered consecutively. By noting the numbers shown in the books of original entry, the auditor can detect the omission of any voucher and by this means may detect the failure to make necessary entries. If a posting is omitted, this will be reflected in the Trial Balance unless both sides of the transaction are omitted, in which case the equilibrium of the Trial Balance will not be disturbed.

It is not the purpose of the present discussion to deal with the procedure by which the auditor accomplishes his task, but only to indicate the nature of this task, and to detect all errors of omission is one phase of it.

Errors of fraud are due to the efforts of an employe or executive to state wrongly the financial condition of the business for one of two reasons: (a) to hide defalcations on the part of the employe or executive, or (b) to mislead those to whom the accounting reports are to go. If an employe is guilty of theft of cash or merchandise, and has access to the accounting records, he may seek to hide his theft by falsifying the records. Executives of the company may desire to misstate the financial condition of the business to mislead the directors and stockholders, creditors, prospective purchasers, or governmental agencies.

It is the duty of the auditor to detect all attempts to state the financial condition erroneously. In the early development of auditing the detection of fraud was regarded as its chief function, but with the modern development of accounting records and the improved methods of "internal check," the possibility of fraud has been decreased and the importance of this phase of the auditor's duties has been minimized by comparison.

Kinds of Audit

The classes of work which under current practice are performed by the auditor are given on page 1159.

(a) Balance Sheet Audit
(b) Detailed Audit
(c) Investigations

The purpose of a Balance Sheet audit is to verify the accuracy of the financial condition of the business at a specific time as shown by the Balance Sheet prepared as of that date. In performing a Balance Sheet audit, the auditor is responsible only for the financial condition of the business on the audit date. Consequently he is not responsible for the detection of theft or fraud which may have been committed, so long as the assets, liabilities, and proprietorship are correctly stated. For example, hundreds of dollars in the form of cash may have been stolen during the year, but the auditor performing a Balance Sheet audit is responsible only for seeing that the cash shown on the Balance Sheet at the end of the year is actually on hand. Although the auditor is not responsible for detecting errors which may have occurred during the past, he should assume such responsibility to the extent of watching for them in the course of the verification of the assets and liabilities and should bring any he discovers to the attention of his client.

A detailed audit comprises an examination of all the necessary records, documents and supporting vouchers of a business organization. It contemplates the detection of all errors of principle, omission, or fraud which have been committed.

An investigation comprises the verification of certain facts which are needed for some particular purpose. For example, it may be desired to ascertain the earnings of a company for a certain period of time to serve as a basis for the calculation of the goodwill of a business which is being sold. The accuracy of the cash records may be desired at the time a cashier or treasurer is resigning or is suspected of a misappropriation of funds. The accuracy of the expenditures for repairs may be desired for the preparation of an income report to the national government. For various other reasons it may be desirable to know the accuracy of certain information, and the auditor may be required to do whatever is necessary to establish the accuracy of the information which he is asked to verify.

Responsibility for Auditing

The foregoing discussion states in a general way the purpose of auditing and the duties of the auditor. Some businesses retain a permanent auditing staff which performs the auditing function.

In a small business it is not profitable to maintain an auditor permanently, since the volume of operations is too small to

occupy his time. In any case it is desirable to have the financial statements which are presented to stockholders, merchandise creditors, and bankers verified by some disinterested party who is not connected in any way with the business. This is accomplished by having an audit performed by a professional auditor and accountant.

The Professional Auditor and Accountant

The professional auditor and accountant offers his services to the public in much the same manner as the physician and lawyer offers theirs. One important distinction is that a large part of the services of the lawyer, and practically all of the services of the physician are rendered to individuals, while the services of the auditor and accountant are rendered to business firms.

In the early development of public accounting, the chief function of the public auditor and accountant was to do auditing work. For this reason he was termed an *auditor*. In later years his work has broadened until the services he renders are of a varied nature. The installation of accounting systems, the preparation of income tax returns, the installation of systems of budgetary control, the preparation of reports for the use of executives, and the giving of counsel and advice with reference to business organization and management are some of the important activities in which the present-day accountant participates. In performing these worthwhile services, however, he is not acting in the capacity of an auditor and it is in the work of the auditor we are now concerned.

The Certified Public Accountant

Because of the importance of the work performed by the public accountant and the confidential relation he bears to his client, it has long been regarded desirable to have some means by which the business public could judge his ability. To accomplish this, laws have been passed in all the states of the union, providing for the examination and certification of public accountants. In each state there is a Board of Examiners who at least yearly give a public examination to those who comply with certain requirements. Those who make a satisfactory grade on these examinations are granted a certificate which entitles them to term themselves Certified Public Accountants. This title is usually indicated by writing after the individual's name the letters "C. P. A." The state laws prohibit any one from terming himself a Certified Public Accountant unless he has passed the examination prescribed by the state. Some states recognize the certificates of other states under certain conditions and permit

the holders of these certificates to practice as Certified Public Accountants within the state.

In Canada and England examinations similar to those of the United States are given, and the successful applicants are granted the title of Chartered Accountant, which is abbreviated to C. A. The American Institute of Accountants, a national organization of public accountants, gives semi-yearly examinations for admission to the Institute, but does not confer degrees. It grades those admitted to the Institute as Members and Associate Members, depending largely on their experience.

The qualifications required for the C. P. A. certificate differ in the various states. In most states the applicant must be a high school graduate or its equivalent and must have had three years' experience in accounting work. In some states accounting work in a private firm will be accepted in lieu of part of the experience requirement, while in others all the experience must be in the office of a public accountant. The requirements vary to such an extent that only their general nature can be stated. Reference must be made to the laws of each particular state for details.

Auditing Procedure

It is beyond the province of this discussion to treat of the procedure and methods by which an auditor accomplishes his task. The primary purpose of this discussion is to point out the nature and importance of the auditor's work. For a discussion of auditing procedure and methods the student is referred to any of the standard manuals on auditing, such as Montgomery's "Auditing Procedure", Wildman's "Principles of Auditing"; and Bell's "Auditing".

The Auditor's Report

Although it is not deemed expedient to treat of auditing procedure in this discussion, it is thought worth while to explain briefly the nature of the report the auditor submits to his client. Although the majority of those who study this text will not engage in the public practice of accounting, and therefore will not be called upon to do auditing work, most of them will sometime have occasion to use the auditor's report.

The content of the auditor's report will depend to a considerable degree upon whether he has performed a Balance Sheet audit, a detailed audit, or a special investigation. If the report covers a Balance Sheet audit, it will contain a Balance Sheet with such accompanying comments as are deemed necessary.

If it covers a detailed audit, it will contain a Balance Sheet, a Statement of Profit and Loss, and the necessary comments. If it covers an investigation, it will contain the statements necessary to present the information desired as a result of the investigation with appropriate comments.

Accountants do not agree as to the extent of the comments the report should contain. The early practice was to make these comments very limited or to eliminate them entirely. The present tendency is to increase their number and scope. Some accountants comment upon each item on the Balance Sheet and the Statement of Profit and Loss, explaining the method employed to verify it and anything unusual with reference to it. Suggestions for improvement in the method of handling some items may be included. Other accountants confine their comments to those items about which there is something unusual or with reference to which the accountant has some doubt.

It is contended by some accountants that the report may be desired for public use—for example, submission to banks or other creditors—and therefore it is better to place in a separate report all comments and suggestions which are not necessary to the proper interpretation of the financial statements. There is considerable merit in this contention. The important point from the point of view of the author is that the auditor should feel that it is a part of his responsibility to offer all suggestions possible which may be helpful to his client or his staff. He should use judgment in making these suggestions and should not offer them in a critical or offensive way. By this means he can increase the esteem in which he is held by his client and consequently benefit both his client and himself.

The Auditor's Certificate

It is customary for the auditor to incorporate a statement in his report which certifies to the corrections of the financial statements contained in it. If the auditor has been able to satisfy himself as to the correctness of all the items on the statements, he should give an *unqualified* certificate in a form similar to the following:

> I have audited the accounts of the X Company for the year ended December 31, 19.., and
>
> I certify that the above Balance Sheet is, in my opinion, a true statement of the financial condition of X Company at December 31, 19..., and that the accompanying Statement of Profit and Loss is a true statement of the operations of the company for the year ended on that date.
>
> JAMES BROWN,
> *Certified Public Accountant*

In some cases the auditor is unable or finds it inexpedient to verify all the items on the financial statement and accepts the statements of others that they are correct. In this case he may *qualify* his statement by explaining the basis on which he makes his certificate. For example, the auditor may be asked to audit the accounts of a manufacturing firm as of December 31, and he may begin his audit on January 15. The inventories have changed since December 31, and consequently he can not by physical count verify the quantity which the inventory record shows as of that date. He may content himself with accepting a statement of the factory manager certifying to their accuracy after investigating and finding that the general method of taking the inventory is proper. Under such circumstances his certificate may be as follows:

> I have audited the accounts of the X Company for the year ended December 31, 19.... The inventories of raw materials, work in process, and finished goods were accepted as to quantities at the amounts stated by the factory manager. I have verified the price extensions and footings of the inventories.
>
> With the foregoing qualification, I certify that in my opinion the accompanying Balance Sheet as of December 31, 19..., and the Statement of Profit and Loss for the year ended that date are correct.
>
> JAMES BROWN,
> *Certified Public Accountant*

Accountants differ as to when a qualified certificate should be given. Some would not introduce a qualification in the foregoing case on the theory that it is generally understood that the accountant does not verify the physical quantity of the inventory. It is thought, however, that frankness between the accountant and those who may use his reports is very desirable. It can do no harm to state the facts fully so all those to whom the report may come will know exactly what the accountant has done to insure the accuracy of the statements it contains.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Explain the relation of auditing to accounting.

— 2 —

Explain and illustrate concretely the purpose of an audit.

— 3 —

Explain the purpose of: (a) Balance Sheet Audit. (b) Detailed Audit. (c) Investigations. State conditions under which each is desirable.

— 4 —

"Some businesses retain a permanent auditing staff which performs the auditing function." Why do not all businesses follow this practice?

— 5 —

Compare the work performed by the public accountant of today with that performed by the public auditor in the early development of the accounting profession.

— 6 —

James Smith writes his name, James Smith, C. P. A. John O'Brien writes his name, John O'Brien, C. A. Explain.

— 7 —

Explain the purpose and content of the auditor's report. Has there been any change in this report during recent years?

— 8 —

Explain the purpose and content of the auditor's certificate.

— 9 —

Explain the difference between a *qualified* and an *unqualified* certificate, and illustrate when each may be given.

LABORATORY MATERIAL

Exercise No. 265

Mr. H. G. Moulton, President of the Moulton Manufacturing Company, desires to have a yearly audit made for his company. The directors of the company doubt if the services received from an audit are worth the expenditure. Mr. Moulton requests you to prepare a statement with reference to the advantages of an audit which he can submit to his directors.

INSTRUCTIONS: Prepare the statement requested by Mr. Moulton, explaining:

(a) The purpose of an audit in general.
(b) The nature of both a Balance Sheet audit and a detailed audit.
(c) The advantages to be obtained from each kind of audit.

Exercise No. 266

After discussing your report to Mr. Moulton, the directors of the company authorize him to employ you to perform an audit of records of the company for the year ending December 31, 19... In the course of your audit you discover the following:

(1) Some items in the inventory of December 31 have been taken at cost when the market price was lower than cost. Other items have been taken at market value when it was higher than cost. You find that if all items in the inventory are taken at cost or market price, whichever is the lower, the total value of the inventory is $8,000.00 less than that shown on the books.

(2) Accrued wages to the amount of $1,200.00 have not been entered on the books.

(3) On July 1 $500.00 was paid for two years' insurance on the factory and equipment. The total of the premium has been treated as an expense of the year just ended.

(4) The cost of repairing and repainting the factory building, amounting to $3,000.00, has been charged to the Building account.

(5) No provision has been made for the income taxes for the following year. You estimate these to be $12,000.00.

(6) Accrued interest on notes receivable amounting to $400.00, and accrued interest on bonds owned for the same amount has not been entered.

(7) Merchandise of the cost value of $2,000.00, which is in the hands of consignees, has not been included in the annual inventory.

(8) No provision for bad debts has been made. You estimate that this reserve should be $1,800.00.

(9) The directors have declared a dividend of $20,000.00 on preferred stock payable on March 1. This has not been entered on the records.

(10) The company has $20,000.00 of bonds outstanding under a mortgage which provides:

(a) That each year there shall be a credit to a Reserve for Sinking Fund equal to 5% of the par value of the bonds.

(b) That each year there shall be a debit to a Bond Sinking Fund for the same amount as the credit to the reserve account.

(11) Stocks purchased on February 1 at $20,000.00 were increased on the books to $25,000.00 on December 31, and the difference credited to Profit and Loss.

(12) Furniture and fixtures costing $2,000.00, but on which there had been established a reserve for depreciation of $800.00, were sold for $1,300.00. The asset account was credited for the selling price at the time of sale. No further entries or adjustments have been made.

(13) The expense and income accounts have been closed and the Profit and Loss account shows a credit balance of $160,000.00.

INSTRUCTIONS: Make the journal entries necessary to give effect to the foregoing adjustments and to close the Profit and Loss account.

CHAPTER LXXVII

AUDITING (Concluded)

Purpose of Internal Auditing

We have seen in the preceding chapter that it is desirable for a company to have the accuracy of its records verified from time to time, and that some companies engage a public auditor for this purpose, while other companies have this service performed in part by members of their organization. The auditing performed by members of the company's organization is usually termed *internal auditing*, while the auditing performed by the public auditor is called *public auditing*.

The primary purpose of the internal audit is the same as that of the public audit, namely, to verify the accuracy of the records. In doing this, the private auditor, the same as the public auditor, will seek to detect errors of principle, errors of omission, and errors of fraud. The internal auditor can check the records more thoroughly and more frequently than the public auditor. He can provide a continuous check on the records of the company throughout the year, while the public auditor provides a check usually only once a year. The private auditor can also check the operating methods of the company more thoroughly, because he has more time to devote to his work and is more familiar with the activities of the company. Moreover, the costs of the services of the private auditor are usually not so large as the costs of the services of the public auditor, and consequently the company can afford to have him spend time in checking the detailed operations of the company. There may be some question concerning how far the public auditor should go in criticising the operations of a company, but there can be little question concerning the responsibility of the private auditor for doing this.

Verification of Records by Private Auditor

The nature of the work performed by the private auditor depends on a number of factors, such as the size of the company, whether the audit is performed at the central office or in the field, and the method of accounting followed. It also depends, to a considerable extent, on the nature of the activities of the company.

To make our discussion concrete, we will assume that an audit is being made of a branch located a considerable distance from the home office, and will indicate the principal tasks of the auditor in making such an audit. We will also assume that the branch contains a complete accounting system, which is tied in with the accounting records of the home office by means of control accounts. The primary responsibility of the auditor in such a case would be the verification of the following:

(1) Cash
(2) Accounts Receivable
(3) Inventory
(4) Fixed Assets
(5) Accounts Payable

As a means of indicating the nature of his work, we will discuss briefly his principal tasks in verifying each of these. No attempt will be made to indicate all the detailed work involved in his tasks, or the nature of his problem in specific cases.

Verification of Cash

(1) *Cash on hand:* The auditor should count the cash on hand

(a) Upon his arrival, and
(b) At some unexpected time previous to his departure.

He should reconcile the amount on hand each time with the balance shown by the cash book at that time, by bringing down the cash book footings at the time of the cash count and verifying all the disbursement items. Proper receipts, vouchers, or deposit slips should be on hand covering all items entered in the cash record.

(2) *Cash book footings:* The auditor should prove the cash book footings covering the last week of the audit period and the first week succeeding the period under audit. In addition, the auditor should prove the cash book footings for at least four weeks, picked at random, throughout the period under audit.

(3) *Petty cash disbursements:* The auditor should check all petty cash disbursement items appearing on cash book sheets against the receipts recorded in the petty cash record and receipted invoices. He should examine all items recorded in the petty cash record to ascertain their propriety.

(4) *Advances to salesmen:* He should check carefully all advances to salesmen and satisfy himself that these advances cover current requirements only.

(5) *Bank deposits:* He should make a check of the deposit slips against items appearing on the cash record. He should also check deposits shown in the cash record against deposit slips. In other words, he should work both from the deposit slips to the cash book and from the cash book to the deposit slips. This is on the theory that the transactions performed are sufficiently numerous that he will not find it expedient to check each item received against the deposit slips. Of course, in a small branch, each cash receipt should be traced to the deposit slip.

It is also well for the auditor to take a number of the deposit slips on file in the branch and compare them with the deposit slips on file with the bank. The bank will usually permit the auditor to make this comparison.

The auditor should not show on the cash records the items he has verified, for to do this would give the cashier information concerning the extent to which the auditor has checked the individual items.

(6) *Cash sales:* The auditor should check the tickets for cash sales against the entries for these in the cash book.

(7) *Checking postings:* He should also check the postings from the cash record to the general ledger and to the accounts receivable ledger. He should make a test check of all the postings to the accounts receivable ledger.

Verification of Accounts Receivable

The auditor should send statements to all the customers shown in the accounts receivable ledger and have their verification of these statements returned to him. If he audits the branch several times a year, it may be satisfactory to verify all the accounts receivable once each year, but verify the large accounts at the time of each visit. The office manager should be required to prepare a Trial Balance of the accounts receivable ledger, and the auditor should check this Trial Balance against the ledger and verify the total of this statement with the balance of the Accounts Receivable account in the general ledger

The auditor should examine the ratings of customers to see that credit has not been extended to customers in excess of their credit ratings. He should examine carefully past-due accounts to see if the office manager at the branch is using all possible means to collect these. If allowances have been made to customers, the auditor will check these carefully to see that they are justified and also to see that credits to customers' accounts have not been made as a means of covering up fraudulent transactions. He will carefully examine all entries made for bad debts to see

that these have been properly authorized, and that no entries are made to the credit of a customer's account except where it has been proved uncollectible.

Verification of Inventory

The auditor will see that proper arrangements have been made for taking the inventory. This will require that the inventory be put in proper condition for counting, that all sales tickets prior to the time when the inventory is to be taken have been entered, and that no sales are made from the goods to be inventoried until the inventory is complete. If it is impossible for the auditor to take the inventory personally, he will have it taken by the members of the local organization under his direction.

He will record the inventory on inventory records, and will examine carefully the condition of the inventory while he is making this record. If any goods are not in proper condition, he will make appropriate notations on his inventory record.

The auditor should either price the inventory himself, or have it priced by the local organization under his supervision. In the latter case, he will make a careful check of the prices entered on the inventory record to see that they are correct.

If there are stock records, the auditor will check the inventory as obtained by physical count against the results shown by these records. If the physical inventory discloses a discrepancy as compared with the stock record, he will make a careful investigation to ascertain the causes for such shortages.

It is preferable for the auditor and his assistants to make all extensions of the inventory, but if he finds it necessary to use members of the local organization for this purpose, he will make a thorough test of the accuracy of these extensions. If goods are stored in outside warehouses, the auditor will obtain the warehouse receipts and check these against the quantity shown on the stock records.

Verification of Fixed Assets

The auditor should make a personal examination of the fixed assets of the branch and prepare an inventory of these. He should then check this inventory against the plant ledger, if this is maintained at the branch, or if not, forward his inventory to the home office for comparison with the plant ledger maintained there. The auditor should examine carefully all entries made under fixed asset accounts during the period of his audit to see that they are properly authorized and that no charges are made to the asset accounts which should have been made to expense accounts.

Verification of Accounts Payable

The auditor should make a careful comparison between the checks issued and the vouchers for which they have been issued in payment. If the transactions of the branches are numerous, it will probably not be possible for him to make a comparison between each check issued and its corresponding voucher, but he should make sufficient comparisons to convince himself that there are no irregularities.

He should also compare the checks with the entries in the cash record. Whether he will compare each check with its entry in the cash record will depend on the number of checks issued during the audit period. In any case, he should make numerous tests.

The auditor should require the office manager to prepare a statement of all outstanding accounts as shown by the voucher record, and should verify this total with the balance of the Accounts Payable account in the general ledger. He should also make comparisons between the accounts shown on this statement and the unpaid vouchers in the voucher file.

Additional Work of Auditor

In addition to verification of the accounting records, the private auditor may give attention to the operating activities of the unit which he is auditing and report such information as may be useful to the executives of the company in supervising the activities of this unit. For example, he may investigate and make a report on the following:

(1) Market and industrial conditions in the territory where the unit he is auditing is located.
(2) Competition in this territory.
(3) Sales policies and methods of the unit.
(4) The condition and adequacy of the physical equipment.
(5) Personnel.
(6) Operating results.

The nature of the information he will supply concerning each of these topics will depend to a considerable extent upon the wishes of the executives of the company, and they, of course, will be guided by the extent to which this information is useful to them in supervising the unit under audit.

It is beyond the field of the present discussion to discuss the nature of this information, but it is worthwhile to emphasize the

importance of this phase of the auditor's work. It is in connection with such work that he has an opportunity to show his real ability and to render a very great service to his employer.

Relation of Auditor to Accounting Department

In a company where a controller is employed, the private auditor usually reports to this executive. This provides the controller with a dependable check on the activities of the accounting department. In some cases, the auditor reports to the chief accountant, but this is usually not a satisfactory procedure because it results in the auditor, who is supposed to criticise the work of the accounting department, reporting to the person who is responsible for supervising the performance of this work. If a controller is not employed, it is usually preferable to have the auditor report to the president of the company, so that he may feel free to criticise the work of the accounting department as well as the operations of the other departments whose activities are reflected in the accounting records.

Relation of Private Auditor to Public Auditor

The private auditor and the public auditor should cooperate fully in the performance of their task. Usually the private auditor can do a large amount of preliminary work for the public auditor. For example, he can prepare numerous schedules, such as accounts receivable schedules and inventory schedules, which can be used by the public auditor in his work.

Every effort should be made to prevent as much as possible duplicating work between the private and public auditor. Each of these should realize that the other can render a service which he is not qualified to render. For example, the private auditor can do a great amount of detail work which can not profitably be performed by the public auditor. On the other hand, the public auditor provides an outside point of view and an independent check which is useful to the company and necessary for the maintenance of proper relations with stockholders and creditors.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

What is the main distinction between the qualifications and duties of a public auditor and those of a private auditor?

— 2 —

J. E. Foster is traveling auditor for the X Corporation, which has numerous branches in different parts of the country. Explain in a general way his duties.

— 3 —

The B Company receives reports which are certified to be correct by Ames & Noble, a firm of certified public accountants. The B Company has a system of internal check which has proved quite satisfactory, and an auditing department which tests the accuracy of the accounting records continuously. What was the probable reason for calling in an outside accounting firm to certify the reports? Could this not have been done by the auditing department? Explain.

— 4 —

The Dreman Company was incorporated to manufacture a patented article, on the sales of which it pays royalties to the inventor. Name six different parties that might desire a public auditor to make an audit of this company's books, and state in what phases of the audit each would be particularly interested.

— 5 —

The following accounts appear on the Balance Sheet of the Acme Manufacturing Company:

Accounts Receivable	$14,640.05	
Less Reserve for Bad Debts	146.40	$14,493.65

How may the auditor assure himself of the adequacy of the reserve without examing each customer's account to determine its possibility of collection?

— 6 —

June 30, the Buildings account showed a balance of $300,000.00; July 31, the balance of this account was $310,000.00. As private auditor, you find that $10,000.00 of "improvements" was charged to the account during July. How would you find out whether or not these items are properly charged to the property account?

— 7 —

You find that the "improvements" charged to the Buildings account (Question 7) were actually repairs. How would you adjust the accounts to show this fact?

— 8 —

The following accounts appear on the Balance Sheet of the Acme Manufacturing Company:

Capital Stock		$150,000.00	
Less: Unissued Capital Stock	$50,000.00		
Treasury Stock	10,000.00	60,000.00	
Total Capital Stock Outstanding			$90,000.00

How would you verify these items?

— 9 —

G. M. Welch, a public accountant, is employed to audit the books of the Z Company. He requests that he be allowed to examine the by-laws of the company and the minutes of stockholders' and directors' meetings. One of the officials of the company protests against allowing an outside party this privilege. Is it necessary or desirable that an auditor have access to the by-laws and minutes? Why?

— 10 —

The professional auditors Beason and Chapman are auditing the books of the Briggs Company. They find that the books are carelessly kept, many erasures and corrections appearing therein. Do you consider this fact of sufficient importance to call to the attention of the management? Explain.

LABORATORY MATERIAL

Exercise No. 267

March 1, the balance in the First National Bank Cash account, carried on the books of the American Manufacturing Company, was $6,943.71, as shown by the cash book and check stub. During the month of March, the total cash receipts as shown by the cash book were $5,200.68. The duplicate deposit slips for March, and the entries for deposits on the check stub, showed that the following deposits had been made·

March 3	$1,281.74	March 13	$817.41	March 24	$399.97
6	623.19	17	606.13	27	463.85
10	476 23	20	289.52	31	242.64

The checks issued during March, as shown by the check stub and cash book, were as follows:

No. 4567	$ 300.00	No. 4575	$ 18.40	No. 4583	$ 14.33
4568	295.60	4576	297.30	4584	632.67
4569	486.22	4577	86.20	4585	79.85
4570	115.70	4578	5.40	4586	116.23
4571	1,500.00	4579	23.39	4587	312.15
4572	112.25	4580	196.43	4588	23.60
4573	7.62	4581	299.90	4589	300.00
4574	604.10	4582	30.52	4590	500.00

As of March 31, the bank gave credit for interest on daily balances of $12.46, which was not recorded on the company's books until April.

Check No. 4572, shown above as $112.25, was entered in the cash book in error as $122.25.

Check No. 4570, for $115.70, did not reach the party to whom it was sent; the correct address not being known, payment was stopped and no other check issued. No correction has been made on the company's books.

Collections on notes receivable owned by the company were received at the bank to the amount of $1,434.24, and were not recorded in the company's general cash record.

A check included in the deposit of $623.19 on March 6, amounting to $7.62, was returned by the bank on account of insufficient funds, and Check No. 4573 was issued to the bank to take up the bad check.

On March 31, the following checks were outstanding:

(a) Issued prior to March 1: No. 4559, $21.90; No. 4562, $110.00; No. 4563, $11.75.

(b) Issued during the month of March: Nos. 4578, 4582, 4583, 4584, 4585, 4586, and 4590, as shown in the list of checks above.

The balance shown by the statement received from the bank was $8,871.58.

INSTRUCTIONS: Make up bank reconciliation as of March 31.

Exercise No. 268

Miss Dora Knapp, manager of the phonograph department of a large department store, gives you the following list to be used in ascertaining the value of the phonograph inventory, for use in preparing reports for the month of May:

PHONOGRAPHS IN STOCK, MAY 31, 19...

Quantity	Style	Finish	Description	Unit Value Cost		Unit Value Market	
15	A	Walnut	New Console	57		60	
12	A	Mahogany	" "				
5	B	Walnut	New Pedestal	39		35	
3	B	Mahogany	" "				
2	C	Walnut	New Radio	166		150	
1	C	Mahogany	" "				
25	D	Walnut	New Standard	97	50	100	
20	D	Mahogany	" "				
18	E	Oak	New Portable	13	50	15	
1	A	Walnut	Repossessed*	57		60	
			Refinishing	3	50	3	50
1	B	Mahogany	Repossessed	39		35	
			Refinishing	4	30	4	30
2	D	Mahogany	Repossessed	97	50	100	
			Refinishing	1		1	50
1	D	Walnut	Repossessed	97	50	100	
			Refinishing		75		75

INSTRUCTIONS: Ascertain the value of the phonograph inventory which would be shown on the Balance Sheet of the company May 31, using the rule of valuing inventory at cost or market, whichever is lower.

*The phonographs marked "repossessed" are those sold on the instalment plan and taken back into stock because the purchasers failed to pay their instalments.

Exercise No. 269

The Marblon Company, whose general offices are in Boston, operates branch sales offices in a number of different cities, one of which is Schenectady. Each branch invoices its customers for sales, collects the accounts, and remits all collections to the home office once each month. Ordinary operating expenses are paid by the branch from a branch cash fund, except the manager's salary of \$150.00 a month and commission of 1% on net sales, which are paid by check from the home office.

The Boston office purchases all merchandise shipped to branches, and pays the invoices for such purchases. Merchandise shipped to the Schenectady branch is billed to the branch by the home office at a price which is 10% more than the actual invoice cost.

An analysis of the transactions recorded in the Schenectady Branch account on the home office books showed the following:

June 1. Balance of Schenectady Branch account, \$24,788.86.

4. Shipped merchandise to branch from stock, invoiced at \$833.80 (cost \$758.00 plus 10%). Prepaid freight on this shipment, \$126.76.

17. Purchased merchandise for the branch, \$217.80, invoice for which was received at the home office. This was shipped direct to the branch, which was billed by the home office for \$239.58. The branch reported that it had paid \$26.13 freight on the shipment, which was shipped f. o. b. branch.

22. Received credit memorandum for \$12.00 for merchandise returned by the branch to the vendor. This was billed to the branch June 17 at \$13.20.

26. Shipped merchandise to branch from stock, invoiced at \$456.50 (cost \$415.00 plus 10%). Through oversight, the freight on this shipment was not prepaid, and was paid by the branch, \$65.20.

29. Shipped merchandise to branch from stock, invoiced at \$395.12 (cost \$359.20 plus 10%). Prepaid freight on this shipment, \$56.45.

30. Received monthly Balance Sheet from the branch (shown on page 1178). A report of operations which accompanied this Balance Sheet showed gross sales of \$5,176.30 and allowances on sales of \$17.25. A check for \$4,406.82 was attached, covering collections of accounts receivable for the month.

THE MARBLON COMPANY

SCHENECTADY BRANCH

BALANCE SHEET AS OF JUNE 30, 19...

Assets						
CURRENT ASSETS:						
Branch Cash Fund		1,585	70			
Accounts Receivable	4,291.84					
Less Reserve for Bad Debts	76.29	4,215	55			
Merchandise Inventory, June 30, 19...		11,942	30			
Total Current Assets					17,743	55
FIXED ASSETS:						
Store Fixtures	3,500.00					
Less Reserve for Depreciation	1,750.00	1,750				
Office Equipment	875.00					
Less Reserve for Depreciation	437.50	437	50			
Total Fixed Assets					2,187	50
DEFERRED CHARGES:						
Prepaid Insurance		239	40			
Supplies on Hand		112	35			
Total Deferred Charges					351	75
GOODWILL					3,576	30
Total Assets					23,859	10
Liabilities						
CURRENT LIABILITIES:						
Accounts Payable—Creditors		125			326	59
Manager's Salary and Commission		201	59			
THE MARBLON COMPANY (Home Office Account)					23,734	10

NOTE.—This Balance Sheet is subject to correction for operations of June 28–30, as follows: sales, accounts collected, reserve for bad debts of 1% of additional sales, cost of merchandise sold, supplies used, accrued payroll, and manager's commission on additional sales.

30. Received telegram from manager of branch office giving changes to be made in the Balance Sheet received, because of operations occurring during the last three days of the month, which were not included in the Balance Sheet, as follows:

"Correct June thirtieth statement as follows add three days sales $453.90 stop accounts collected $202.15 stop change inventory to $11,669.96 not including goods in transit stop change supplies inventory to $99.49 stop accrued payroll two days $89.40."

30. Sent the branch manager a check for $206.13, salary and commission for the month.

June 30, before the reports on branch operations have been received, the balance of the Schenectady Branch account on the home office books is $22,450.92; this balance includes the 10% added to invoice cost of shipments during the month.

An analysis of the transactions recorded in the books of the Schenectady branch showed the following:

June 1. Balance of The Marblon Company (Home Office) account, $25,853.10.

1. Paid rent for June, $100.00.

5. Received merchandise from home office, $833.80, on which freight of $126.76 had been prepaid.

5. Paid wages, $763.25.

10. Bought supplies on account, $42.55.

10. Paid Merchants Drayage Company $100.00 on account.

12. Paid wages, $770.50.

17. Received direct from vendor, merchandise purchased by home office, $239.58. Paid $26.13 freight.

19. Returned $13.20 of merchandise received June 17, to the vendor.

19. Paid wages, $767.40.

22. Paid $8.45 for repairs on door of storeroom.

25. The account of J. Z. Jones, amounting to $18.75, is deemed uncollectible and is to be charged off.

26. Paid wages, $768.95.

28. Received merchandise from home office, $456.50. Paid $65.20 freight on this shipment, which was not prepaid by the home office through oversight.

28. Accounts receivable amounting to $4,406.82 have been collected up to and including June 26, and a remittance check for this amount has been forwarded to the home office.

28. A Balance Sheet as of June 30 is prepared and sent to the home office. This Balance Sheet does not take into consideration the operations of June 28–30, a summary of which will be telegraphed the home office so that the home office records may be

adjusted to show these facts. Sales up to and including June 26 were $5,176.30 and sales allowances, $17.25.

30. Received invoice and freight bill from home office, showing that merchandise billed at $395.12 had been shipped, on which freight of $56.45 had been prepaid; this merchandise has not yet been received.

30. A telegram (page 1178) giving the changes to be made on the June Balance Sheet for the operations of June 28–30 was sent the home office.

INSTRUCTIONS: 1. Construct the Schenectady Branch account on the ledger of the home office.

2. Construct The Marblon Company (Home Office) account on the ledger of the Schenectady branch.

3. Make up a reconciliation of the branch accounts with the home office accounts as of June 30.

4. Make such corrections of the branch Balance Sheet as will complete it for consolidation with the home office Balance Sheet.

5. The home office shows the balance of the Schenectady Branch account as an account receivable on its Balance Sheet. State how you would show the balance of this account on the home office Balance Sheet.

CHAPTER LXXVIII

PERSONAL BUDGETS

Meaning of Budgeting

Each individual engaged in business activities receives an income from which he must meet his expenses. It is necessary that his expenses be less than his income if he is to accumulate savings, and savings are necessary in order to acquire wealth. Without the acquirement of wealth, it is impossible to attain economic independence, and without such independence, life can not be enjoyed to its fullest. These ends can be attained most effectively by planning one's income, expenses, and savings for each year. An estimate of income, expenses, and savings is termed a *budget*.

Advantages of a Budget

The following advantages can be obtained from the preparation and use of a budget:

(1) Income and expenses can be balanced.
(2) A wiser distribution of expenses can be secured.
(3) Savings can be increased.

Balancing of Income and Expenses

Under modern merchandising methods, the appeals to one's desires are so numerous and continuous that there is a constant danger that one may spend more than he earns. This danger is increased by the prevalent custom of buying on the instalment plan. It is easy for one to promise to pay in the future for goods he can obtain and enjoy in the present. Every individual must, therefore, carefully watch not only his current expenditures, but his future promises to pay if he is to keep his expenditures within his income. This can be done satisfactorily only by making a careful estimate of what his income is to be and planning expenditures so that under no conditions will they exceed his income. Companies selling on the instalment plan not infrequently find cases where people have contracted to pay such large amounts in the future that they do not have sufficient income left to meet their current needs.

Distribution of Expenses

Few people can have all the things they desire. It is necessary that they choose what is most necessary and desirable. There is always a danger that one may spend his income to satisfy immediate desires and neglect to provide for future needs. It is desirable, therefore, that a careful study be made of one's necessities and that the amount available to spend be divided properly between his various needs. This plan is made easier if standards of expenditures are established. For example, one should decide on a certain percentage of his income which will be spent for rent, clothing, food, and other necessities. After an estimate of his income is made, it can then be distributed according to the standards set. It is only by this means that a wise distribution of expenses can be obtained.

Increasing Savings

The desirability of savings is self-evident. One who does not save can not hope for financial progress. It is not wise to spend all of one's income early in life with an expectation that an increase in income will make possible future savings. There is a natural tendency for one's desires to increase in proportion to his income, and unless the habit of saving is established early in life, there is a danger that savings will not be made. It is always possible to see other people who live comfortably upon less income than one receives himself. This should serve to indicate to each person that he can, if he will, so control his expenditures that some savings can be made regardless of the amount of his income. The only safe method of insuring savings is to set aside a definite amount for this purpose periodically.

After income has been estimated, the amount to be saved should be determined before estimates are made for expenses. This is true since otherwise so much may be allotted to certain expenses that nothing will be left for savings. After savings have been fixed, the balance of the income can be distributed.

Method of Preparing Budget

The preparing of a budget involves two steps:

(a) Preparation of an estimate of income.

(b) Distribution of income as between savings and expenses.

Estimating Income

Income should be estimated for a year in advance and then broken down by months or weeks so as to show when the income

will be received. Income received from salaries will usually be obtained regularly. Income received from interest and dividends will usually be received periodically. The modern tendency is to pay dividends quarterly and interest semi-annually. Income from a business or a profession may not be received regularly, although it is customary for a person so engaged to withdraw a uniform amount from the business or profession each month. Whatever the sources of one's income may be, he should make a careful estimate of this amount and distribute it monthly according to when it will be available for expenditures.

Estimating Expenses

The first task in estimating one's expenses is to provide for those which must be met regularly. An estimate should be made then of the extraordinary expenses which will occur intermittently. Careful attention must be given to the latter classification of expenses so that an amount may be saved in anticipation of them.

An individual, without dependents, can readily prepare a budget which will correspond to his income. Room rent may be $3.00 a week or $30.00 a week, according to one's standard of living, and other expenses may vary proportionately. It will be a little difficult to make proper provision for irregular expenses, such as medical and dental service and clothing, but care should be taken to make them adequate; otherwise, when these expenses do occur, it may be necessary for one to draw upon his savings.

The planning of expenses for either an individual or a family is facilitated by making a proper classification of them. This classification will vary with each situation, but the following is indicative of the expenses of a typical family.

I. Shelter
- (1) Rent (or taxes)
- (2) Fire insurance
- (3) Upkeep and repairs

II. Food
- (1) Groceries and meats
  (This account may be subdivided as much as desired)
- (2) Ice
- (3) Meals outside of home

III. Operating Expenses

(1) Fuel
(2) Water
(3) Laundry
(4) Service
(5) Light
(6) Telephone
(7) Household equipment
(8) Upkeep and repairs

IV. Clothing

(1) Wearing apparel
(2) Sewing supplies

V. Advancement, Recreation, Charity, Etc.

(1) Education
(2) Travel
(3) Car fare
(4) Gifts
(5) Physician and dentist
(6) Papers, books and magazines
(7) Church and benevolences
(8) Entertainment
(9) Amusement
(10) Miscellaneous, such as stationery, postage, etc.

Various studies have been made to ascertain what percentage of the total income should be spent for the various purposes indicated by the foregoing classification of expenses. It is apparent that these percentages will vary according to the income of the individual and also according to the locality in which he lives. The following percentages are ascertained from a study of the expenses and savings of families of moderate income in a large city.

(1)	Savings	12½%
(2)	Rent	25%
(3)	Food	25%
(4)	Operating Expense	10%
(5)	Clothing	15%
(6)	Advancement	12½%

Individuals, without dependents, will determine percentages in a similar manner, but the allowances for savings and expenses will be considerably different. For example, savings will ordinarily be more than 12½% and the rent expense will be much less.

Each individual must decide for himself the amount he desires to spend for each purpose. Care should be exercised to prepare a well-balanced budget; to do this it is necessary that he does not plan to spend too much for one purpose or neglect his necessities for other purposes.

Experience will aid each individual in arriving at a conclusion concerning how much he should spend for each purpose. It is well to emphasize, however, that in each case he should not fail to set aside a substantial amount for savings before he commences to estimate his expenses.

Bookkeeping Record

Special methods have been devised for keeping a record of income and expenditures of individuals and families. They are frequently needed because many people do not have a knowledge of double entry bookkeeping. Those who understand bookkeep-

PERSONAL CASH RECORD

Total Receipts	Date	Explanation	Savings	Total Expenses	Analysis of Expenses: Rent	Food	Clothing	Car & Bus Fare	Personal	Advancement	Recreation	Donations	Sundry
26.30	4/1	Balance											
30	4/7		6	18.07	4.50	7.78	1.95	.90	1.65		.60	.50	.19
30	4/14		6	20.10	4.50	8.10		.80	.30	3.50	1.35	.50	1.05
30	4/21		6	31.63	4.50	7.34	15	.90	2.38		.40	.50	.61
30	4/28		6	17.68	4.50	7.85		.90	.15		.60	.50	3.18
144.30		34.82	24	87.48	18.00	31.07	16.95	3.50	4.48	3.50	2.95	2.00	5.03
35	5/5		7	18.44	4.50	7.63		1.10	.98		3.50	.50	.23
35	5/12		7	33.77	4.50	7.91	7.50	.90	3.01	8	.90	.50	.55
35	5/19		7	31.86	5	8.26	12.75	.90	3.20		1.10	.50	.15
35	5/26		7	18.59	5	8.49		.90	1.05		.40	1.50	1.25
286.30		44.16	52	190.14	37.00	63.36	37.20	7.60	12.72	11.50	8.85	5.00	7.21
35	6/2		7	22.20	5	8.90	3.50	.80	2.16		.85	.60	.39
35	6/9		7	29.03	5	8.63		.90	11.90		1.65	.50	.45
35.15	6/16		7	27.55	5	8.80	3.98	.90	.32		7.92	.50	.13
35	6/23		7	55.55	5	9.06	25	.90	1.19	10	.80	2.50	1.10
35	6/30		7	20.57	5	8.77		.90	4.16		1.15	.50	.09
461.45		29.41	87	345.04	62	107.52	69.68	11.70	32.45	21.50	21.22	9.60	9.37
29.41	7/1	Balance											

Illustration No. 195, Columnar Cash Book for Personal Receipts and Expenditures

ing can keep their records most satisfactorily by following ordinary bookkeeping procedure.

The basis for the records is a ledger in which accounts are grouped in the usual manner. One account is opened for each asset, liability, income, and expense, and for proprietorship. When the books are closed, the Profit and Loss account is debited and the expense accounts are credited for the expense allowances in the budget. The balances in the various expense accounts then show the amounts by which the expenditures are greater or less than the budget figures. These balances must be taken into consideration when the budget is being prepared for the following year.

The original entries may be made in an ordinary cash book, but a special column cash book (Illustration No. 195) is most convenient. Such a cash book provides one column each for total receipts, savings, total expenses, and each expense frequently incurred. All the expenses for one day are commonly entered on one line; or, if desired, the daily expenses may be jotted down in a memorandum book and the total of each kind of expense recorded in the cash book at the end of each week. In posting, the total of the "Total Receipts" column is debited to Cash and credited to Income, and the totals of the "Savings" and "Total Expenses" columns are credited to Cash. The total of the "Savings" column is debited to Savings, and the total of each of the expense columns is debited to the proper expense account.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

James Green, a shipping clerk, who receives a salary of \$22.50 a week, has accumulated savings of \$500.00 during the five years he has been working. He receives increases in salary from time to time, and five years later is made head of the shipping department at a salary of \$150.00 a month. At this time, his total savings amount to \$600.00. He is surprised to find that, although his salary has increased, he has actually saved less than when he earned less. How do you account for this fact, and what steps would you suggest that he take to remedy it?

— 2 —

On your recommendation, James Green prepares a budget. He finds that in many cases his expenditures vary considerably from the budget estimates. He says that he does not see any reason for keeping a budget if he can not keep within the limits set. How would you answer this objection?

— 3 —

James Green, who is keeping a budget of his personal income and expenses, records his actual receipts and expenditures in a cash book similar to Illustration No. 195. Very often he forgets to record an item, and consequently he is unable to reconcile the balance shown by the cash book with the amount actually in the bank and on hand. How would you adjust such discrepancies? Suggest a method of making the record so that Mr. Green will not find this part of keeping a budget irksome.

— 4 —

J. D. Williams receives a weekly salary of \$45.00. Mrs. Williams makes out a weekly list of expenses to be paid, the usual items being the following: grocery bill, meat bill, insurance, laundry, car fare, lunches, church dues. Once each month, the following items are added to this list: rent, water bill, gas and electric bill, telephone bill. In addition, there may be bills for the following: house repairs, painting, clothing, doctor, dentist.

Mr. Williams' salary has always been sufficient to meet ordinary expenses, but any considerable expense such as painting the house, prolonged illness, etc., has always found them unprepared financially. You suggest that they keep a budget and set aside

a specific amount for savings. Mrs. Williams says she does not know how to operate a budget and is doubtful that one would be of any help. Explain to her how to operate a budget so as to increase savings.

— 5 —

Julia Jung and Georgiana Benfey are stenographers, each receiving a weekly salary of $35.00. Miss Jung lives at home and is not required to contribute any part of her salary to the support of her family. Miss Benfey lives at the Y. W. C. A. and sends $10.00 a week to her family, which is located in a distant city. Explain the difference in the need for keeping a budget on the part of each of these, and the effect on the proportionate amounts each would spend for such items as clothing, food, amusement, laundry, doctor, dentist.

— 6 —

Explain the difference in the problems confronted in preparing a personal budget for (a) a doctor in general practice, (b) a bookkeeper, (c) a teacher, (d) a business man, (e) a student, (f) a salesman whose compensation is a commission on sales.

— 7 —

C. H. Monroe says he does not keep a budget because it is "too much bookkeeping". Do you think the advantages derived from the use of a budget overbalance this objection? Explain.

— 8 —

D. T. Gage does not prepare a budget, but keeps a record of his income and expenses for use in making his income tax return. He says he knows from past experience just how much he can spend and how much he can save, without the preparation of a budget. Do you think a budget would be of any value to him? Explain.

— 9 —

George Beatty receives a salary of $200.00 a month. He pays $20.00 a month on a loan incurred while he was in college; $50.00 a month on an automobile purchased on a monthly instalment plan; $15.00 a month for garage rent; $10.00 a month for insurance, and $40.00 a month for a furnished room. He deposits the remainder in the bank and withdraws it as he needs it. How much do you think he could save monthly? Explain how you would prepare a budget for Mr. Beatty.

LABORATORY MATERIAL

Exercise No. 270

Miss Jean Haders, who receives a salary of $40.00 a week, has the following weekly expenditures:

Room	$ 6.00
Meals (average)	10.00
Car fare	1.00
Payment on loan from bank	8.00
Church	1.00

The loan from the bank was made to help send a brother through college, and will be paid in full by May 31.

In addition to the weekly payments, she carries insurance on which she pays quarterly instalments of $13.26 (March 4, June 4, September 4, and December 4).

Miss Haders' home is fifteen miles out of town, and too inconveniently located for her to live there and work in town unless she has her own automobile. She is now living in town, but plans to buy an automobile on the monthly instalment plan and live at home, if her salary will permit it. A down payment of $210.00 is required on the automobile, and the balance is payable in monthly instalments of $40.00 for one year. She wants to save enough so that she may leave at least $100.00 in her savings account when she buys the automobile; the balance in her account January 1 is $220.00.

INSTRUCTIONS: 1. Prepare a budget for Miss Haders for the year, showing estimated income and expenses by weeks; show both amounts and percentages.

Retain this budget for use in the next exercise.

Exercise No. 271

During the year, the following changes occur which affect the budget of Miss Jean Haders (Exercise No. 270):

(a) She joins a bridge club June 25, in which she pays monthly dues of $1.00.

(b) Her salary is increased to $45.00 a week on July 1.

(c) She has her eyes examined and has glasses fitted at a total cost of $26.00, payable September 1.

(d) She buys an automobile and moves to her home as soon as she has saved $310.00.

At the time she moves to her home, she incurs the following expenses:

(1) A down payment of $210.00 on the automobile

(2) A monthly payment of $40.00 on the automobile

(3) Lunches in town, about 50c each (other meals are taken at home)

(4) $5.00 a week to her family for board

INSTRUCTIONS: Revise the budget of Miss Haders which you prepared in Exercise No. 270 so as to take these changes into consideration.

Exercise No. 272

During the last decade, agitation by labor unions and social workers for a "living wage" has resulted in an extensive survey, in different localities, of the actual wages on which many families live. Different ratios for distributing the income between savings and expenses have been worked out for income of various amounts. If possible, secure from current periodicals suggested ratios for apportioning income to savings and expenses for a family of four in your locality, whose monthly income is $200.00; or, if this is not feasible, use the ratios given on page 1184 in this chapter. Apply these ratios to the solution of the following problem:

Henry Adams, who lives in your town, receives a salary of $150.00 a month. His family consists of himself, wife, and three children. The eldest child is employed in an office as clerk, at a weekly salary of $15.00; the other two children are in school.

The family has an automobile, which Mr. Adams estimates costs $7.50 a month for gasoline, oil, and minor repairs. Five years ago he purchased the house in which his family lives, for $6,000.00; a down payment of $2,000.00 was made at that time and the balance borrowed from a building and loan association, on which a weekly payment of $10.00 is made ($4.00 on the principal and $6.00 interest). Weekly insurance payments amount to $1.75.

INSTRUCTIONS: 1. Assuming any additional facts necessary, prepare a budget for Henry Adams and family for one year, stating amounts and percentages.

2. Design the forms which you would advise Mr. Adams to use in recording his income and expenditures, and explain to him how to make the proper record on these forms.

CHAPTER LXXIX

BUSINESS BUDGETS

Need for Business Budgets

We have seen that it is desirable for the individual to plan his income and expenses in order to secure the most effective use of his income in meeting his economic needs and in providing for a maximum amount of savings. It is equally important that a business firm plan its income and expenses in order that its operations may result in a maximum amount of profits.

In a small company this planning is usually done in an informal way by means of conferences between the chief executive and his assistants. When a company becomes sufficiently large that it is necessary for the chief executive to delegate a considerable amount of responsibility to his assistants it becomes increasingly difficult to plan activities by such informal means. It has been found by experience that more desirable results are obtained if each subordinate is required to submit to his superior a formal statement of what he plans to accomplish and the estimated cost of performing the activities for which he is responsible. The preparation of such statements by the executives of a company and their coordination into a well-balanced program for the business as a whole results in budgetary control. It is the purpose of this chapter to discuss briefly the method by which business budgets are prepared and the advantages to be obtained from their use.

Essentials of Budgetary Control

The procedure by which budgetary control is operated must of necessity vary from firm to firm. It is rare indeed that any two firms can follow exactly the same procedure. In all cases, however, the essential features of budgetary control are:

(1) The statement of the plans of all the departments of the business for a certain period of time in the form of estimates.

(2) The coordination of these estimates into a well-balanced program for the business as a whole.

(3) The preparation of reports showing a comparison between the actual and estimated performances and the revision of the original plans when these reports show that such a revision is necessary.

Departmental Estimates

Each department should prepare an estimate of its activities for the budget period. The method of stating these activities depends on the nature of the operations of the department. The sales department should usually show its estimated sales in both volume and value and it should also show its estimate of the cost of securing these sales. The production department should state the volume of production it plans for the period and the amount of materials, labor, and manufacturing expenses it estimates will be necessary to carry out this program. The purchasing department should state the quantity of materials and supplies it plans to buy and their cost. The accounting department, traffic department, office manager's department, and similar departments should show their estimated expenditures for the period. Finally the financial department, using all the other estimates as a basis, should estimate the cash receipts and disbursements for the period.

Some executives believe that it is impossible to estimate accurately what the future operations of a department will be. It is useless to deny that it is often very difficult to do so. Nevertheless it is necessary to make plans for the future if any effective control is to be exercised over business operations. The past is gone and can not be changed. It is only the future which is subject to control. The more difficult it is to plan what the future will be, the more urgent it is that plans be made. Often the difficulty of judging future operations is more apparent than real. It is not necessarily true that in business "history repeats itself", but it is true that the happenings of the past will influence the future and for each effect there is a cause. By studying the relation between cause and effect as shown by the past, executives are able to judge much concerning the future from present conditions. Even though estimates are not entirely accurate, they are better than no estimates at all. It is better to have a map which charts our way in rough outline than to have no map at all.

It is well to add that estimates may be made in such form that they will provide automatically for variations. In making estimates of selling costs or production costs, percentage or unit costs may be set up for different volumes of sales and production. When the actual volume is determined, a comparison can be made between the actual percentage or unit cost and the estimated or budget cost for this volume. For example, a com-

pany operating a number of flour mills finds it difficult to estimate accurately the volume of production at each mill, for the volume is increased and decreased as the price of wheat fluctuates. It finds, however, that it can divide its production costs into those that are relatively fixed and those which are relatively variable. By this means it can estimate the cost per barrel of flour produced under varying volumes of production. At the end of each month the number of barrels at each mill is ascertained together with the per barrel cost and this cost compared with the standard or estimated cost for this volume. Another company operating under similar conditions has carried this plan further by budgeting the cost per barrel in terms of each of the sixteen classes of expense incurred at each mill. Another company budgets its selling expenses by setting up a per diem cost for each salesman in each territory and for each town and city in the territory. The hotel rates and other expense charges in each city are investigated and a reasonable per diem expense for a salesman established for this city. This not only enables this company to estimate more accurately what its selling expenses will be but also enables it to judge the correctness of the amount reported by the salesmen.

These illustrations serve to indicate the possibilities of budgetary control as applied to departmental activities, and they also indicate the possibilities of overcoming what may at first seem insurmountable difficulties in the way of accurate estimating. We shall see further indications of these possibilities as we go along.

Coordination of Estimates

Because of the interdependence of the activities of the departments of a business, some departments will need to use the estimates of other departments in making their own estimates. For example, the production department must know the estimated sales before it can estimate the production necessary to meet the sales demands; the treasurer must know the plans of all departments before he can estimate the cash receipts and disbursements. Not infrequently the plans of the departments will conflict. The sales department may want to sell more than the production department thinks it can profitably produce, or it may want to sell specific articles which the production department does not desire to produce. On the other hand, the production department may desire to produce articles which the sales department does not think it can sell profitably. Finally, the financial department may not be able to finance the volume of operations called for by the sales and production programs. Consequently, some plan

must be followed which will provide for a coordination of the departmental estimates. In a small business this may be accomplished by having the executives informally discuss their plans with each other and make the necessary adjustments. In case of disagreements, the president acts as arbitrator. In most firms, however, better results are obtained if a definite procedure is established for the coordination of the budgets and their combination into a summarized budget for the firm as a whole.

This can be accomplished by having the department heads transmit their estimates to an executive in charge of budgetary procedure, who combines them into a master budget and transmits this together with the supporting estimates to a budget committee composed of all the principal executives with the president as chairman. This committee considers the proposed budget and makes such revisions as it thinks necessary. The department heads as members of the budget committee will be given an opportunity to defend their original estimates. After the budget is approved by the budget committee, it is transmitted to the board of directors for final consideration. When it is approved by the board, it becomes the working program for the business. The executive in charge of budgetary procedure transmits to each executive a copy of his budget as approved by the board of directors. The budgetary procedure should be so organized that the executives will receive their approved budgets a sufficient time before the beginning of the budget period to enable them to make appropriate plans for their enforcement.

The budget when adopted in complete form sets limits upon the expenditures of all the departments. These limits can not be exceeded without the permission of the budget committee. The budget also sets up standards of performance. For example, it states the sales that are to be made by the sales department and the goods to be produced by the production department.

Budget Reports

Each department should make plans to carry out its program as outlined under the budget. For example, the advertising department makes contracts for advertising space; the sales department sets quotas for its salesmen; the production department through its planning department sets up schedules of production. Records should be established which will show the performance of each department in such form that it can be compared with the budget of the department. This means that the classifications shown in the budgets should correspond with the classifications shown in the accounts. In fact a budget should be regarded as a statement of future accounts made in

terms of units of responsibility. Executives frequently ask how the information provided by the departmental budgets should be classified and in how much detail it should be shown. They can find their answer by referring to their classification of accounts. It may be that their accounts do not provide for a proper analysis and classification of data and consequently should be changed. But until such changes are made, the budget should be made to correspond with the present classification.

Periodic reports should be made showing a comparison between the estimated and actual performance for the period. These should go to the heads of departments, the budget committee and the board of directors. After considering these reports, the budget committee and board of directors should make such revisions as they think are necessary. The budget reports are a very essential part of budgetary control. Unless they are carefully made and conscientiously studied, a considerable part of the benefits which should be gained from budgetary control will be lost. If each executive knows that a comparison is to be made between his estimate and his actual performance, he will exercise greater care both in the preparation and enforcement of his budget. These reports should be designed to show the following: (a) current performance, (b) past performance, (c) estimated performance, and (d) results of performance.

MONTHLY REPORT OF SALES

Month of...........19...

Department	This Month	Estimated This Month	% Inc. or Dec.	Last Month	% Inc. or Dec.	To Date This Year	Estimated To Date This Year	% Inc. or Dec.	To Date Last Year	% Inc. or Dec.
A........										
B........										
C........										
D........										
E........										
F........										
G........										
....										
....										
....										
....										
....										
....										
Totals ..										

Illustration No. 196, Monthly Report of Sales

Illustrations Nos. 196 and 197 are illustrations of such reports. Increases and decreases are shown by percentages so the executives can quickly make comparisons.

Budgetary Control Not a New Idea

All business firms practice budgetary control to a greater or less degree, although many of them do not realize the fact. When rates of depreciation on fixed assets are established, a budget on the life of this equipment is made; when standard dividend rates are approved by the board of directors, they are setting a budget on the earning capacity of the firm; when the salaries of employes are agreed upon, a budget is set on their earning capacity. All these budgets are changed from time to time as experience shows the need for correction in the original estimate. It may be found that the assets are depreciating more rapidly than originally estimated, that the earning capacity of the firm is greater or less than originally thought, and that the employes are more or less efficient than originally supposed. In the same manner estimates of sales, production, finance and expense should be made in the light of the best information available and these estimates changed whenever more complete or more accurate information so dictates.

MONTHLY REPORT ON SELLING EXPENSE

Month of............19...

Department	This Month		Estimated This Month		Per Cent Increase or Decrease	Ratio Expense To Sales This Month		Ratio Expense to Sales to Date	
						Estimated	Actual	This Year	Last Year
A..............	....	...	....	...	......	......	......	......	......
B..............	....	...	....	...	......	......	......	......	......
C..............	....	...	....	...	......	......	......	......	......
D..............	....	...	....	...	......	......	......	......	......
E..............	....	...	....	...	......	......	......	......	......
F..............	....	...	....	...	......	......	......	......	......
G..............	....	...	....	...	......	......	......	......	......
....	....	...	....	...	......	......	......	......	......
....	....	...	....	...	......	......	......	......	......
....	....	...	....	...	......	......	......	......	......
....	....	...	....	...	......	......	......	......	......
....	....	...	....	...	......	......	......	......	......
....	....	...	....	...	......	......	......	......	......
Totals..........	....	...	....	...	......	......	......	......	......

Illustration No. 197, Monthly Report on Selling Expense

Business men are coming to realize that coordination of departmental activities is necessary for the maintenance of a unified business policy and that this coordination can be accomplished best by having the plans of each department submitted in writing for the consideration of the executives of all the departments. Plans have always been made, but they have commonly been carried around in someone's head. Because of the increase in the volume of business performed by the typical industrial unit, with the corresponding complexity in business organization, it is coming to be less and less possible to maintain a business organization that depends upon intuitive faculties of a single individual developed by years of experience, faculties which perish with the individual. The organization must be independent of any individual in it. All of which goes to show that there should be some systematic method of gathering information from the past and present, formulating on this basis plans for the future, and subsequently reporting how these plans have been carried out. Such an accounting and statistical organization we may call a budget system.

Advantages of Budgetary Control

The primary advantages obtained from the preparation and use of budgets are:

(1) The employes who prepare the budgets are educated to think through their problems thoroughly.

(2) Cooperation between executives and their assistants is promoted.

(3) An effective method of coordinating all the activities of a business is provided.

Education of Employes

It is sometimes erroneously thought that the budgets are prepared primarily for the use of the major executives of the company. If a proper plan of budgetary procedure is employed, department heads, foremen, field supervisors and even salesmen should obtain benefits from the preparation and use of budgets. If budgets are intelligently prepared, it is necessary for all those who are responsible for their preparation to think through their problems thoroughly before they submit their future plans in the form of estimates. For example, the manager of a branch, when he is asked to prepare a budget for his branch for a six months period, must try to anticipate the various problems of his branch for the next six months and think through a solution of these problems before he prepares his estimate.

It is natural for employes to postpone a careful study of future problems until the time comes when these problems must be met. Most employes who have administrative work to perform must handle so many details each day that they neglect to think through their future problems. If they are required to prepare a budget of what they plan to do for six months in advance, it becomes necessary for them to anticipate their future problems and think through a method of handling these problems; otherwise their budget will be very inaccurate and they will be subject to the censure of their superiors when a comparison is made between their estimate and the actual results obtained. The employe who is required to make a budget, therefore, is educated gradually to anticipate his problems and to plan in advance how to handle these. Experience has shown that most problems can be met satisfactorily if plans are made in advance to meet them. The budget, therefore, serves a very useful purpose in educating the members of an organization to think more about the problems with which they have to deal.

Cooperation Between Executives and Assistants

If an employe submits to his superior, at the beginning of each budget period, a definite statement of what he is planning to do during this period, it provides the executive an opportunity to discuss with his assistant his plans and to guide him in his thinking with reference to the method of handling his problems. The employe is also provided an opportunity to present in a definite form his ideas concerning what he thinks should be done in handling the activities for which he is responsible.

The modern tendency in organization is to place larger responsibility on subordinates. When this is done, it is necessary that an effective means be provided for controlling the activities of these subordinates. The budget provides the executive a definite means of exercising such control since he can ascertain from the budgets what the plans of his assistants are before these plans are put into execution. The executive is given a means of ascertaining whether or not the thinking of his assistants and himself is in harmony. He can ascertain by a study of the budgets submitted by his assistants whether or not their plans are in harmony with the policies of the company, as established by the board of directors and the executives. For example, if the company has adopted a policy that expenses must be curtailed, the executive can see by a study of the expense budgets whether his assistants are planning to comply with this policy by decreasing expenses. If the company has adopted the policy that sales of some products should be increased and that sales of other products should be curtailed, the sales executive can see by a study of the sales

estimate submitted by the field organization whether or not it is planning in harmony with this policy.

In brief, the budget provides the subordinate an opportunity to present in a definite form his ideas for the consideration of his superior and it gives the superior an opportunity to correct the thinking of the subordinate if it is erroneous. After the executive and his subordinates have come to a conclusion concerning what the budget should be, it enables the subordinate to proceed with the confidence that his actions are in harmony with the wishes of his chief and that if he complies with the budget he will not be subject to criticism later because of the results he obtains.

Coordination of the Activities of a Business

The relationship between the activities of the various departments of a business is so close that no one department can carry on its activities properly without a consideration of the activities of one or more of the other departments. Neither can the executives of a business judge properly the past or contemplated activities of any one department independent of the activities of the other departments. To make possible the preparation of a well-balanced program for the business as a whole, it is essential that the plans of all the departments be presented for consideration of the executives and that the plans of the several departments be modified if necessary to bring about coordination. This can be best accomplished by the submission of formal estimates to the president and the coordination of these by the president and his assistants into a program for the business as a whole.

For example, in a manufacturing business there should be close coordination between the sales and production programs. In a mercantile firm there should be equally close coordination between the sales and buying programs. To obtain sales orders which can not be filled leads to loss in several ways:

(1) It causes the incurrence of unnecessary expenses in getting orders which can not be filled.

(2) It causes the expense of recording the orders when received.

(3) It causes the expense of answering the inevitable complaints of the customers who fail to receive the goods when promised.

(4) It causes the expense of reversing the entries made for the order when the customer finally cancels it.

(5) It incurs the ill-will of the customer, which may result in the loss of his trade in the future when it may be needed.

On the other hand, the production or purchase of goods in excess of sales orders leads to even more undesirable results:

(1) It ties up capital in unsalable goods, with the consequent loss arising from the capital cost.

(2) It ties up capital which may be needed in carrying on other operations and in some cases the loss of the use of this capital may result in serious financial embarrassments.

(3) It results in the procurement of goods which may physically deteriorate or become obsolete before they can be sold.

(4) It results in unnecessary storage costs.

If a sales estimate is prepared and coordinated with an estimate of production or estimate of purchases, these difficulties can in the main be eliminated. Any disagreement between the sales and production or buying departments is settled by the budget committee, which is qualified to render impartial judgment.

But the coordination of sales with production and purchasing means something more than merely ascertaining the quantity which the sales department desires to sell and securing from the production department a promise to produce this quantity. The quantity which can be sold is usually not an arbitrary amount. It is dependent to a considerable degree on two variable factors, namely the price of the product and the amount of sales effort expended in its sale.

The establishment of a sales price is the first point of contact between the sales and production departments when a coordination of their activities is sought. It is preferable that these departments first seek coordination in terms of price rather than in terms of quantity, which is so often the case. Real coordination results in the preparation of a program which will sell goods at a price which will produce a sufficient volume of sales to require a sufficient volume of production to reduce the unit cost to the point where the largest possible profit will be earned on the capital invested. The sales price is affected not only by the cost of production but also by the cost of selling and the rate of profit it is desired to earn. The profit desired is dependent on the amount of capital required, which is again affected materially by the rate of turnover. The effect of sales price on rapidity of turnover must be considered when prices are being fixed.

All of this leads to the conclusion that in seeking coordination of sales and production a number of factors must be considered, and these can best be considered by setting forth the sales and production programs by means of budgets in written form.

Limitations of Budgetary Control

It is as essential that the limitations of budgetary control be understood as that the benefits to be derived from it be realized. Unless its limitations are understood it is possible that:

(1) Too much will be expected from the budgetary program, and when it fails to fulfill expectations it may be thought useless and abandoned.

(2) Too much reliance may be placed on its operation, and this may result in too little emphasis on other methods of administrative control.

(3) It may be followed blindly, with results more detrimental than those which arise from its absence.

The most important limitations of budgetary control are the following:

(1) The budgetary program is based on estimates. Estimates can not be made which are entirely accurate, and consequently they must be used with judgment and not followed arbitrarily. It is also necessary that provision be made for frequent revisions of these estimates if actual performance shows the necessity for such revision.

(2) Budgetary plans will not execute themselves. After budgets are prepared, constant vigilance is necessary to insure their enforcement. Detailed plans must be made for carrying out the budget and these plans must be enforced. Unless there is an efficient organization these objectives will not be attained.

(3) Budgetary control can not take the place of good management. It is not the purpose of budgetary control to deprive the executives of the necessary freedom of action which is essential to progressive management. Its purpose is to provide the information on which administrative decisions are based and administrative control is exercised.

(4) Budgetary control can not be perfected immediately. The procedure called for by the budgetary program is usually new to executives and it takes time to train them to make and use properly estimates of future operations. Too much should not be expected of budgetary control at the beginning. In many cases it is desirable to install budgets gradually so that the executives may be educated how to prepare and use them.

QUESTIONS FOR CLASS DISCUSSION

— 1 —

Mr. A. says that he and the heads of the departments of his business spend considerable time in committee meetings discussing the outlook for business and he can not see that it would be of any advantage for them to prepare a formal budget. Do you agree with Mr. A.? Why or why not?

— 2 —

Mr. X. says that his business is of such a nature that it is impossible to plan the sales accurately and therefore he feels that it is useless to prepare a sales budget. Do you agree?

— 3 —

Do you feel that it would be advantageous for the management of a business having a large number of widely scattered branches to have budgets presented by the branch managers? Why?

— 4 —

"The sales department should usually show its estimated sales in both volume and value." Why?

— 5 —

"It is not easy to coordinate sales possibilities with production capacity. In fact, it is one of the most difficult of administrative problems." Do you think budgets would be of assistance in overcoming this difficulty?

— 6 —

The Smith Manufacturing Company has five factories located in different cities. The King Manufacturing Company's production activities are all located at one plant. What differences do you think there would be in the preparation and enforcement of the budgets of these companies?

— 7 —

What advantages does a small firm derive from budgets to compensate for the labor and time involved in making them?

— 8 —

"Budgets should be prepared in terms of units of responsibility." What does this mean?

— 9 —

The Y Manufacturing Company manufactures only for special order, while the Z Company manufactures for stock. Will there be a difference in the method of preparing the budgets of these companies because of the difference in production policy? Explain.

— 10 —

A. C. Brown, a wholesale dry goods merchant, having read much literature on the advantages of budgetary control, prepares for his own use estimates of sales, purchases, selling expense, salaries, and net profit for a six month's period, to be compared with the actual results shown by the next semi-annual Statement of Profit and Loss submitted by his bookkeeper. At the expiration of six months, he finds that:

(a) Sales are $8,000.00 less than estimated.
(b) Purchases cost $2,000.00 more than estimated.
(c) Selling expense was $3,000.00 less than estimated.
(d) Salaries were $2,000.00 less than estimated.
(e) Net profit was about $5,000.00 less than estimated.

What essential factor in budgetary control did Mr. Brown ignore? Suggest procedures by which he can use his budget to control operations for the next six months' period.

— 11 —

The budget manager of the Grant Department Store says that the employees of the company should be interested in the budget of their respective departments and in the actual performance of the department as compared with the budget. He suggests that a meeting of each department be called separately each month, at which the results produced by the department would be discussed and bonuses on sales awarded. Formerly, bonuses have been included in the pay envelopes without specific comment. What advantages and disadvantages do you see in this plan?

LABORATORY MATERIAL

Exercise No. 273

Company A is a small department store having fifteen departments each in charge of a department head. The store is managed by the owner who has two chief assistants, one who acts as merchandise manager, and the other who has charge of the financial, accounting, and office functions.

Company B has a chain of six hosiery stores each in charge of a store manager. The managers of these stores all report to the owner of the stores.

INSTRUCTIONS: Outline budget programs for both of these companies and point out the reasons why they differ.

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LIST OF ILLUSTRATIONS

Since com[illegible] Rec'd a 90 day, 6% note of $900 interest has been collected in Advance. 60 d has expired.

Cash. 13.50

Disct Earn. 13.50

Expired Int Earned 4.50

Int Rec. in Adv. 4.50